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ABSTRACT

The goal of the POR FIN research design was to develop a language-based curriculum emphasizing the audiolingual approach and integrating academic and social-functioning subject matter. The modular curriculum is designed so that each lesson is independent and complete in itself, and provides a high degree of motivation, retention, and achievement for the undereducated bilingual adult. The document is divided into three major sections. The first section describes the research methodology employed, the structure of each lesson, and the measurement and statistical devices utilized in the study. The analysis and presentation of the controlled experiment's test results are offered in part 2. Four student performance measurement devices and other variables are described and analyzed to evaluate the POR FIN curriculum. They comprise a passive language and math test, a self-concept rating scale, a language proficiency rating scale, and a social-functioning test. Data from administrator, teacher, and student questionnaires are analyzed. In part 3, results of the study are interpreted. Conclusions reached were that the experimental group achieved better results in the following areas: (1) retention was higher, (2) testing recorded greater achievement, and (3) questionnaires recorded significantly positive reactions. The appendix offers over 100 pages of data analysis and the testing instruments utilized. (MW)

ED101100

Adult Student Retention And Achievement With Language-Based Modular Materials

$$SS_{tot} = \left(\sum X^{2}_{tot}\right) - \frac{\left(\sum X\right)^{2}_{tot}}{N_{tot}}$$

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$$SS_{bg} = \left[\frac{\left(\sum X_1\right)^2}{N_1} + \frac{\left(\sum X_2\right)^2}{N_2} + \ldots + \frac{\left(\sum X_k\right)^2}{N_k}\right] - \frac{\left(\sum X\right)^{2}_{tot}}{N_{tot}}$$

POR FIN

Program Organizing Related Family Instruction in the Neighborhood

Bexar County School Board
San Antonio, Texas 78207

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POR FIN

Program Organizing Related Family Instruction
In The Neighborhood

A Reseach Demonstration Project

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ADULT STUDENT RETENTION AND ACHIEVEMENT WITH LANGUAGE-BASED MODULAR MATERIALS

July, 1973

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ABSTRACT

Findings of Por Fin II clearly indicated that students wanted above all to learn oral English with real fluency. The response, therfore, was an attempt to provide a language-based curriculum. They also wanted a flexible program in which their progress was truly tangible. The result was Language-Based Modular Materials for Adult Education in four volumes.

These materials were tested in a controlled experiment designed to compare progress and motivation using these materials with that when using standard materials. Both progress and motivation were increased. Although the experimental design of necessity had variables which could not be completely controlled. Thereby making firm inference impossible. The indication is clearly that these materials are well worth using and testing in other adult learning situations.

PREFACE

In its third year of research, Por Fin once again received invaluable assistance and information from a myriad of sources. Since the testing of materials involved working with students in adult centers in the Bexar County Adult Continuing Education program, a special note of gratitude is extended to all of the personnel in the learning centers. Without the cooperation of these individuals, the project would have been impossible.

Among those agencies and resource personnel who have contributed in the on-going success of Por Fin were:

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Ms. Carlene Turman

Gratitude must also be extended to Trinity University, San Antonio, Texas, for technical assistance with the collating of final publications.

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Mrs. Maurice O'Neal, Teacher
Miss Vicki Rodriguez, Secretary

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STATEMENT OF THE PROBLEM

Overview

Adult continuing education, as an extensive but still under-implemented phenomenon, is not an idea of recent contemporary definition or vintage. Exclusive of essentially vocational education, it has had some successes and many failures. The need for it is incontrovertible; the funds for it are almost in short supply; and the undereducated adults who need it most are frequently reluctant to seek it, or even to avail themselves of whatever opportunities are provided.

The goal of the Por Fin research design was, therefore, an attempt to provide solutions for some of the more critical problems of adult education: interesting and involving hard-core undereducated persons;[1] minimizing drop-out rates; and developing guidelines for a curriculum responsive to the needs, interest, and desire of such students. Such curriculum necessarily would have to reflect an understanding in depth of both congnitive and affective goals. The close and natural correlation of these problems is clear. Self-evidently the proof of solution would have to be invested in lesson units written, demonstrated, and evaluated in a manner predetermined to proper and valid.

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[1] James Salaiz, et al. Program Organizing Related Family Instruction in the Neighborhood. San Antonio, Texas: Bexar County School Board, 1971.

Adult Student Preference

Research among undereducated adults,[2] particularly the bilinguals of the Southwest, had disc[illegible]ed above all an overwhelming desire on their part for greater proficiency in speaking English. They want more oral instruction, in contradistinction to guidance in workbooks, and a great deal more oral practice. For both the factors of subject matter and classroom time such expression of their preference strongly suggests the audio-lingual approach to learning. They want to hear sympathetic and well-educated persons speak English and to speak it themselves in a situation as little remindful as possible of the traditional grade-school classroom. While oral language expansion and practice are their primary goals, they also want to be reassured frequently, preferably on a day to day basis, that the subject matter of their learning has relevance and practicality, and that they are making progress. They want to see, in terms of the performance objectives for each module, the proof of their learning. More often than not these student-defined goals are not achieveable within the usual program structure.

Materials and Techniques Currently in Use

Few researchers and authors have addressed themselves to the problem of English oral language acquisition for the undereducated adult. Even the contributions of the few have not been fully responsive to the need for oral language instruction. Materials presently in use do not provide adequate opportunity for oral practice within a credible subject-matter conversation. Such materials usually have one or more of the following flaws:

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[2] Barbara McDougall, et al. An Indepth Study of Curriculum Needs as Perceived by Adult Students. San Antonio, Texas: Bexar County School Board, 1972.

1. They are expressed in the third person and do not present first and second person phrasings suitable for use in actual dialogue.
2. They present only unconnected (sometimes even unrelated) strings of sentences which make it difficult for an undereducated adult to relate usage to credible conversation.
3. They reflect persistence in teaching grammar per se to those adults who lack grammar training in their first (native) language and who palpably do not have sufficient linguistic sophistication to assimilate the instruction. The more seemly alternative, of course, would be the teaching of analogous structures through organized oral practice.
4. They are designed for use in a single-purpose one-time language course intended to be followed by an academically oriented basic education course equated with traditional levels of elementary schooling. This is one in the face of language-learning

specialists and contrary to the experiences of persons who belatedly acquired a degree of fluency in a second language. They should know that real oral competency is not acquired in a brief course, but is a skill that usually only rewards intensive practice of considerable duration.

5. They ignore, or least fail, to take cognizance of of the level of language and, therefore, the degree of conceptual development achieved by the adult student in his mother (native or first) tongue. If the student is unsophisticated in his first language, the first acquisition he should be enable (by materials and methodology) to achieve is the vocabulary structure appropriate to the objects, experiences, and ideas he can, or actually does, discuss fluently in his first language.
6. They do not provide for a step-by-step approach through conceptualization exercises at successively more difficult language levels. The rationale that is lacking is that if he does not understand conceptualization or abstraction in his native tongue he will also fail to acquire the needed degree of sophistication in English.

Por Fin Response

Responsive to the research-defined need, as well as to desirable changes or modifications that became apparent during the demonstration and evaluation phase, the Por Fin staff produced essentially language-based materials, emphasizing the audio-lingual approach, which integrate academic and social-functioning subject matter.[3] Modules were designed to provide a higher degree of motivation, retention, and achievement than usually experienced with available workbook materials. The lessons were conceptualized and written to enable the achievement of both congitive and affective goals. It will be noted that performance objectives are stated specifically, usually in terms of the student's ability to recognize, pronounce, spell, explain, use, and relate key words to events of the day and to familiar processes on a more personal basis. This should quicken perception and the thought processes. The relationship of time, part-whole, analogy, and cause-effect are readily apparent in the structure of the dialogues, and in that of the expository material as well.

Modular construction of a course of studies, in the main, requires each module to be largely a learning unit complete in itself and without prerequisites. One does not presuppose the achievement of the performance objectives of another. A curriculum of this character thus enables the adult student, with the usual and sometimes unexpected family or work problems, to be absent, or even to terminate, and rejoin the class without experiencing appreciable difficulty in continuing his learning experience or having to "make up" missed lessons in order to comprehend the lesson being presented.

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[3] Barbara McDougall, et al. Curriculum Guideslines for Adult Education. San Antonio, Texas: Bexar County School Board, 1972.

Modular construction of a curriculum has still another meaningful advantage over the traditional method. Under guidelines expressing, for the most part, what the adult students themselves have assisted in defining as their needs, the structure permits quick response to performance-based changes and the integration of other relevant materials. Results of the use and evaluation of the developed modules, within a curriculum that is more suggestive than comprehensive, would appear to support the use of the audio-lingual method and modular construction of a curriculum for under-educated bilingual adults.

RESEARCH METHODOLOGY: OPERATIONALIZATION OF THE RESPONSE

Research Design

Por Fin II had vocalized the needs and wants of those most affected by adult education--the administrators, teachers, and most important, the students. With the conception of the problem well defined by that research, Por Fin II set about the task of filling the void left by contemporary adult materials.

Survey of Pertinent Literature and Staff Development

The first operative step in any research project is a perusal of the literature in the field. Por Fin staff received an initial orientation on curriculum development from Dr. Barbara McDougall Gonzalez. The staff then reviewed a number of texts on curriculum development (see bibliography). They also reviewed all of the texts and workbooks in use at the time in the San Antonio learning centers. A personal growth curriculum developed by a New Mexico adult education group was also examined.

Learning to Use English by Mary Finocchiaro, English in Action by Robert Dixon and The Aims of Education by Alfred Whitehead were especially helpful as guides for vocabulary, exercises, and content for the language-base. For the most part, however, the staff found the available curriculum materials to be inadequate practice of oral language skills. Attempts at social-functional and psychological development were not evident in most of the materials.

Most of the material was presented in workbook form with many exercises but little else to break the monotony.

In addition to examining education materials, the staff also had to thoroughly research several content areas. This function was on-going, the nature of the investigation depending on the module being constructed at the time. The San Antonio Library and college and university libraries provided the materials needed to fulfill this aspect of the research.

In terms of intensive staff development, two areas were covered. First of all, a number of staff members were able to acquire intensive and extensive training in the theory and practice of the audio-lingual method of teaching English as a Second Language. This training was provided under the auspices of the BOLT program of the Puerto Rican Forum. The staff members received three weeks training. The second area was statistics as applied to educational research. The staff reviewed previous training in this area and using this as a base, proceeded with examination of new statistical measures that would be useful in the subsequent research.

Design and Development of the Modular Curriculum

The major premise underlying the Por Fin material is that it is language-based. The lessons or modules center around language activities directed toward other goals being integrated into the language framework. The topics integrated included some standard academic content, individual socio-psychological development, and functional skills such as jobs, consumer education and health education. Inclusion of these areas both broadens and motivates the student. The emphasis on language, however, provides for the development and substantial strengthening of the most important life skill the individual needs, the one that underlies all other areas and endeavors. In addition this contextual approach is actually the most effective with adults and will best facilitate learning.

This means that the module as used here is a highly integrated body of skills and content specifically designed to meet several objectives at once. There need not be several lessons for several subject areas, nor several sets of materials. Further, the module is of a manageable length and is extremely clear as to student objectives and accomplishment thereof, thus providing for student motivation and effective record-keeping.

The designation of module clusters can really be quite arbitary, and herein lies the great flexibility of this program. These clusters I, II, et., or A, B, etc.--the label is unimportant--need not be completed for the student to receive credit. He receives credit for each individual module. The cluster designations are merely for convenience with the pattern chosen here usually being 12 modules per cluster in order to have a "quarter" system.

There need be no provision for prerequisites. All students are grouped according to language ability, educational background, and preference. Then each group begins studying at the beginning of the materials set, with the advanced students progressing as rapidly as possible, using the elementary material as a review. In this manner they eliminate many of the differences they began with and begin new materials for their level at more nearly the same point.

Insofar as time is concerned, most people in most ESL groups progress at the rate of approximately one lesson each week with review of other lessons to be included. More advanced groups and those doing review could do two or three lessons each week.

The Structure of Each Lesson

Each lesson must have reference to the content and psycho-social objectives of the general guideslines. Further, each contains certain elements in common with the others. First of all, each lesson or module is prefaced by notes to the teacher discussing the materials, objectives, methodology, activities, evaluation, etc., for the section. Such discussion emphasizes attitudes and approaches most of all so that the teacher will understand how to motivate the students toward the stated goals and how to achieve as many of the possible side-benefits as he or she can. Materials are not discussed to any degree because materials of this type are by definition self-contained for the most part.

Methods and activities are also largely built-in and defined by the structure of the lessons, but might more easily be defined by a manual for the lesson set for each level. Evaluation goals are built into the performance objectives, which provide for quantification of achievement. Such evaluation may be largely subjective, however, inasmuch as extensive formal testing in each lesson by the teacher would probably discourage most students. Secondly, each module contains performance objectives which are stated in terms that lend themselves to easy evaluation of behaviors that each student exhibits as result of exposure to and participation in that module. Records are kept which take the form of a checklist covering all the performance objectives for the materials. With this specific a recored, the student enjoys more flexible exit-reentry situations and sees his progress quite clearly.

The third component or component cluster covers language skills. This material provides practice in audio-lingual skills and in reading and writing of material previously learned orally. Students practice dialog material, do question-and-answer exercises, practice dialog sentences in new and/or related contexts, and do drills that isolate and provide practice on some of the structures included in the particular lesson so that the students learn them well enough to form analogies and use the structures in other contexts. This is accomplished by a progression of drills, the first of which are very tightly structured and the latter of which call for random and creative responses from the student. Along with this type of practice, the student works with a reading passage, copying exercises and/or written drills. He also studies the vocabulary of the lesson, although it is first taught contextually. He then has activities in which he can use the language, such as class discussions. The fact that controversy is sometimes built into the dialogs (the dialogs can be between proponents of two or more different viewpoints in any topic) helps provide material that will generate these discussions. The use of all these approaches varies from level to level, of course.

ESL Level

Of necessity, the approach for the English as a Second Language level is more highly specified, as the internal consistency has to be greater in order to take into account the highly limited knowledge of the language possessed by the students. For this and for each other level, it is desirable to have a master chart of basic language structure and vocabulary to use in order to insure that all essential patterns and words be covered in the given sequence of lessons.

There must be a distinction between ESL for the non-educated and ESL for those who have prior education in their native tongue. Material prepared for the latter group can be paced more rapidly and can rely more on analogy than that prepared for the "basic" group. That material of necessity

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is based on extensive repetition and drill. In the basic material there must also be a more decided effort to progress logically from emphasis on comprehension to emphasis on controlled speaking to emphasis on "free" speech.

Reading and writing are also built in with a sliding scale of emphasis. For example, students first learn sight reading of familiar vocabulary and phrases, moving later to sounding out new words and new topics. For the basic group with non-readers, one should first emphasize initial consonants, then initial clusters and last initial vowels. At that point, "sounding out" techniques are taught.

Advanced Level

Although the advanced (II, III) level materials might have many of the same elements as the ESL, (dialogs, drills, etc.), needs and emphasis might cause the lessons to assume different outlines. The need will more often be for material suitable to generate discussion, so that language may be practiced as "free" speech, even though in a controlled framework. Drills (and the dialog and/or reading material itself) are designed more for remedial purposes in grammar or for vocabulary expansion rather than for acquisition of linguistic "basics". The discussion method is the key here, but variety will occur in keeping with a desired flexibility.

Insofar as the amount of time to be devoted to the foregoing activities is concerned, the primary guideline to keep in mind is an approximate span of fifteen minutes for each activity or exercise. Attention may be lost if the activity continues longer than this. Other than that, the amount of time available should serve as a guide.

The content of these language-oriented materials first centers on everyday situations in which a student is likely to need to function linguistically. In addition, the staff selects and integrates content from other areas to fulfill the academic objectives and the socio-psychological objectives. This selection is random in many cases, since each lesson is to be self-contained; and continuity is not a goal. At times, however, the progression from simple to more difficult material must be provided. For example, division material would naturally be integrated at some point after addition material. Many of these goals are met at least in part through the perceptive choice of activities as well as content and through successful participation in discussion activities which help raise the student's self-concept and self-confidence in interactional situations. Logically, these types of activities follow much of the other material in the lessons or modules. The student progresses from learning about himself and about ways to function in society to actual participation.

in the mat. Place

All sorts of standard reference materials on the fields covered in the content objectives were consulted for ideas on subject matter to include in science, social studies, math, English, etc. Standard works on methodology were consulted for ideas on activities to suggest, including discussion and tutoring. In making these selections many of the choices involved were dictated by common sense and common knowledge of the needed functional academic skills. Also choices were evaluated in light of their possible contribution to the achievement of the socio-psychological objectives. Helping the students achieve these objectives should indeed be the guiding principal throughout such a project.

Nature of the Controlled Experiment Design

For purposes of testing the Por Fin curriculum, two groups of students were used, referred to hereafter as the Experimental and Control groups. Each group was divided into three levels--ESL/I, II, III. The Experimental group was composed of students recruited by the Por Fin staff, following the procedure outlined below in the section on "Sample Selection". These students were presented curriculum materials developed by Por Fin. The Control group was composed of students attending classes at that time in the three adult learning centers participating in the experiment. These students used the standard ABE material.

Por Fin provided the Experimental group two weekly classes totaling four hours a week of instruction. Because Por Fin had no control over the exposure received by the students in the Control group, their exposure varied up to as high as 30 hours per week. Control of this variable would have made the interpertation of results much easier.

However, at least one can surmise that wherever the Experimental group achieved greater success, then did so despite having less class time.

Both groups were subjected to the measurement devices explained below in the section on "Research Instrumentation". Standardized methods of administation were followed. Devices were given in the same order to each group.

Classes began on September 12, 1972, and ran through February 15, 1973, a period of five months, Thanksgiving and Christmas holidays notwithstanding. Ideally, a time period in which there were no long holiday interruptions would have better served the purposes of the experiment, but there is no such period of any length during the school year.

Another variable which the staff could not control was the type of facilities available. Por Fin undoubtely had the worst of the four units involved. Since some studies have suggested a correlation between pleasantness of environment and rate of learning, this variable should be held constant if possible. However, once again, it simply indicates that wherever the Experimental group achieved greater success, they did so despite physical inequalities.

Teaching methods were not held constant nor was there a serious attempt to do so. Again, administrative limitations did not permit a rigid training period to insure uniformity. Also, the type of curriculum materials in many ways dictates the teaching method. A more valid result, it was felt, would be achieved by allowing the curriculum to reflect the teaching methods. Specifics were obtained in the teacher questionnaires, however, and will be discussed subsequently.

Sample Selection

In order to test the curriculum, it was necessary to implement the experiment described above. Originally the staff had hoped to supply the students for both the Control and Experimental groups. Because of limited time and staff, it became apparent that the task would be too burdensome. In addition, the centers concerned were already working at near capacity. Therefore, the ten current classes at the learning centers were used. An effort was made to enroll in the sample at least 30 students from each level for both the Experimental and Control groups. No criteria for membership in the Control sample was maintained other than the requirements that the student be currently enrolled in the level at which he was to be placed in the sample and that he have the specific number of years of previous schooling; 0-3 for ESL/Level I, 4-6 for Level II, and 7-11 for Level III.

The selection of the Experimental sample was more complicated. A random sampling technique was employed. The sample was weighted toward residents of the Model Cities Neighborhood, the economically disadvantaged, and Spanish speakers. For the most part, door-to-door recruitment filled the rolls for ESL/Level I, while use of the media provided most of the sample for Level III. Level II enrollment resulted from a good mixture of the two techniques. The goal of 30 students in each level was met. In both cases this allowed for at least a 50% drop-out rate before the statistically desirable minimum of 15 students was reached, this being a normally predictable attrition rate.

The initial sample in both groups was composed of those persons who completed the Passive Language and Mathematics Test and remained in class for at least two periods. Anyone who left the groups after that point was considered a drop-out unless they attained a GED. Only persons who completed all four testing devices during both the pre- and post-test periods were considered as members of the sample during the compilation of the final evaluation tabulations.

Measurement Devices

When a project is an experimental situation, devices must be used to provide a basis for comparison and evaluation. For Por Fin, these devices took the form of tests, rating scales, and questionnaires. Each device will be discussed in detail below. The conclusions drawn from each device are presented in Part III under "Interpretation of Results". A sample copy of each device is contained in the appendix. (See Appendices 1-10).

Passive Language and Math Test

After a perusal of available tests, the staff decided to employ a test developed by the Camp Gary Job Corps for use with ESL students. The language sections for Level II and Level III were written by Dr. Barbara McDougall Gonzalez and Greg Davenport. A math section was added by Tony DeLeon and Fabian Cortez. Input was solicited from the Control groups centers, and some changes were made to insure maximum congruence with structures, content, and vocabulary from both sets of materials to be used in the study.

Although the test was designed to provide an overall measurement of language and math skills, the math section could have had more work problems. The language section measured only the passive skills of the students, primarily their reading comprehension. No action was taken to correct the math deficiencies as the discovery came after the testing. The language portions were bolstered by use of a Language Proficiency Rating Scale.

Students were asked to work as far as possible in the language sections and then do the same in the math section. They were given as much time as they desired. Usually no more than 2 hours was needed. The same test was used for both the pre- and post-test period.

Language Proficiency Rating Scale

This scale was designed to give an indication of progress in the active language areas of speaking and writing and a measure of aural comprehension, as well as another gauge of reading comprehension ability. It was originally designed by the Language School at Lackland Air Force Base for use with the training and was revised for this special use by Dr. Barbara McDougall Gonzalez. The scales were completed by the student's teacher at the beginning of the test period and again at the end of the period.

Self-Concept Rating Scale

Por Fin was concerned that the curriculum provide development in areas other than those traditionally associated with adult education or academic achievement. Of particular importance was the student's perception of himself and his ability to relate to a complex society. Outside raters were employed both before and after the teaching period to provide self-concept ratings. The raters rated the same students both times in order to keep any subjective bias constant.

Social-Functioning Test

Also of importance was the student's ability to function in day-to-day affairs. Several general areas, including political awareness, newspaper use, library use, health needs, consumer affairs, etc., were isolated as those with which the student would likely come into contact. Questions were developed to test the student's ability to function within these general areas. By necessity the test is normative. Evaluation must therefore be normative. It is of great use in gaining insights into a student's weak functioning areas, as well as providing a point of comparison. The test was given both before and after the test period. This test was developed by Greg Davenport and translated into Spanish by Dr. Gonzalez and Sylvia Rodriguez for use with ESL students.

Teacher Evaluation of Materials and Students

Each Por Fin lesson had a set of performance objectives which served as a base for the development of performance evaluation criteria. After the completion of each lesson the teacher evaluated each student on the basis of these objectives. This gave the teacher not only a chance to gauge the student's performance, but also an opportunity to see if the performance objectives of the lesson were well related to the content and method of presentation of the curriculum. If several students did not fulfill the same objective, then a note was made to revise either the curriculum or the objectives, whichever seemed more feasible.

Student Evaluation of Classes

Periodically, usually once every 2-4 class meetings, the Experimental group students were given an opportunity to express their opinions on the curriculum and methods covered during that day's class. They were also asked if there were areas in which they felt they needed more work. Several modules were developed as a result of their recommendations.

Student Questionnaire

The student questionnaire was intended to give the student an opportunity to evaluate the overall project. It was administered after the test period by the teachers in both groups. It gave the students an opportunity to express their feelings on the value of the teachers, the curriculum style, and subject matter. It also offered them a chance to recommend changes they would have made.

Teacher Questionnaire

The teacher questionnaire was designed to give the teacher an opportunity to state how he rated the curriculum materials used in his class. It provided space to comment on how they perceived the curriculum needs of students. This can be correlated with the answers of the students. Finally, it offered a chance for the teacher to make recommendations for changes. This questionnaire was answered after the test period by teachers from both groups. Responses on this instrument are also compared to those from a Por Fin II questionnaire to check evolution of attitudes.

Administrator Questionnaire

The administrator questionnaire was designed to give the administrator a chance to rate present curricula and make recommendations for changes. Like the other questionnaires, it was administered only to both groups after the test period.

Statistical Devices

Overview

In order to provide input from all facets of the adult education situation in question, various instruments and indicators for both teachers and administrators as well as for students were developed. The data obtained from these instruments provided a partial basis for the final revision and development of the curriculum that has been utilized. The results of these efforts are divided into descriptive and sampling statistics. Those items that were considered relevant from the various research instruments that were used are presented (findings sections) in graphical and tabular form with their appropriate descriptive narratives so as to assure clarification of any ambiguities that might be inadvertently projected.

The teachers' questionnaires were designed to elicit relevant information with respect to teaching methodology utilized, as well as student objectives as perceived by the instructors. Additionally, subjects taught in each particular level were examined in order to compare them with those subject areas that were being developed and used with the experimental group. In addition to the teacher questionnaire, instructors in both the experimental and control groups rated each individual student on a Language Proficiency Scale so as to ascertain the student's comprehension, speaking, reading, and writing proficiency.

Students' questionnaires were designed with respect to two major areas of concern: first from the stand point of acquiring data that would convey to the researcher the reasons why students came to class, and secondly, to obtain the kind of input that could be provided by the student. This latter objective was an attempt to discover those areas of study that were perceived by the student as relevant.

The Inferred Self-Concept Scale, developed by Dr. E. L. McDaniel of Southwest Texas University, was used to determine the attitudinal change that occured within and between both the experimental and control groups. The Wilcoxon Signed-Ranks Test, a non-parametric test, was employed to compare distributions consisting of matched groups. This test, performed on both the experimental and control groups, consisted of a pre- and post-rating of individual students. A Mann-Whitney U-Test was also performed for all levels of the experimental vs. control group. Results from each of these tests are presented in the findings section of this report.

The sampling statistic methods used on the pre- vs. post-test consisted of an analysis of variance to determine if there was a significant difference in the performance of the various grups, T-ratio analysis for each comparable group, and a chi-square analysis to determine the project's success with respect to student retention. Finally, for the benefit of the non-technical reader, all data and statistical procedures used in the compilation of this report have been included in the appendix.

Cognitive Domain

Both within and between group analyses were done on scores on the passive language-math test to determine the effectiveness of the curriculum used with the experimental group. An F-ratio test was performed to see if the means of the two groups differed significiantly. T-ratio was used to test individual levels within the groups.

EXPERIMENTAL GROUP	CONTROL GROUP
Post Score	Post Score
Level I	Level I N.S. @ .05
Level II	Level II $t < .05$
Level III	Level III $t < .01$

(T-ratio analysis was performed to determine the significance of the difference between the means of experimental and control groups)

EXPERIMENTAL GROUP	CONTROL GROUP
Pre-test vs. Post-test	Pre-test vs. Post-test
Level I t ∠.01	Level I N.S. @ .05
Level II N.S. @ .05	Level II t ∠.01
Level III N.S. @ .05	Level III N.S. @ .05

(T-Ratio performed for each level in the experimental and control groups)

Affective Domain

A Wilcoxon Signed-Ranks Test was performed to determine if there was a significant difference in student's attitudes. This was done by comparing pre- and post-ratings on the Inferred Self-Concept Rating Scale within the two groups by levels.

EXPERIMENTAL GROUP	CONTROL GROUP
Pre-Rating vs. Post-Rating	Pre-Rating vs. Post-Rating
Level I t ∠.01	Level I N.S. @ .05 level
Level II t ∠.01	Level II N.S. @ .05 level
Level III N.S. @ .05 level	Level III N.S. @ .05 level

A Mann-Whitney U-Test was performed to determine if there were any significant difference in attitudinal outlook of Experimental vs. Control group. This was one by comparing the post-ratings of the groups on the Self-Concept Scale.

EXPERIMENTAL GROUP	CONTROL GROUP	
Post-Ratings @ Time$_2$	Post-Ratings @ Time$_2$	
Level I	Level I	N.S. @ .05 level
Level II	Level II	N.S. @ .05 level
Level III	Level III	N.S. @ .05 level

Furthermore, data from the student questionnaires, administrator questionnaires, and teacher questionniares were tabulated to determine the measures of central tendency for the items in each particular instrument.

Explanation of Statistical Devices

The Mann-Whitney U-Test. The Mann-Whitney U-Test is a rank test for two independent samples at the same time. The Mann-Whitney U-Test done for self-concept post-ratings for Levels I, II, and III, Experimental versus Control groups, shows no appreciable difference in attitudinal outlook of respective groups.

The Wilcoxon Signed-Ranks Test. The Wilcoxon-Signed-Ranks Test is also used with data such as ranks or classified frequencies. It is a non-parametric test used to compare distributions consisting of matched groups: the same individual or group tested under two conditions. Furthermore, since the self-concept scale provided only ordinal data--which arises from the operation of rank ordering--it was necessary to resort to a test that did not have to estimate any of the population characteristics. This test performed on the experimental group shows a significant difference in attitudinal outlook from the time students were enrolled in the program to the time of termination (completion). Similar analysis performed on students or the control group shows no significant difference in attitudinal outlook. The experimental group Level I with a T=68 was found to be significant at the .01 level of probability, while the T=4 for the control group Level I was found to be non-significant at the .05 level. The T=0 for Level II Experimental group was significant at the .01 level of the Control Groups T, 27.5 with N_{R-S}, which was found to be non-signiciant at the .05 level of probability. Finally the T values for both the Experimental and Control groups for Level III was found to be non-significant at the .05 level.

T-Ratio. This statistic provides the means with which to answer the question which most psychological, sociological, and educational experiments set out to answer; namely, if one group is treated in one way and another group in a different way, will there be a difference in their resulting behavior? Will there be a "real" difference in the mean performance of the two groups? Furthermore, it made possible statements of probability about the differences between the arithmetic means of the two groups involved in the experiment.[4] Finally, the data obtained from the Passive Language Test was interval data - that is, data whose units or intervals of measurement are equal, which makes it appropriate to use a T-Ratio test.[5]

F-Ratio. The analysis of variance (F-Ratio) is a statistical method which provides an objective criterion for deciding whether the variability between groups is large enough in comparison with the variability within groups to justify the inference that the arithmetic means of the population from which the different groups were drawn are not all the same.[6] Since the levels of the experimental group and the three levels of the experimental group and the three levels of the control group were exposed to a different curriculum as well as to a different teaching technique (ie. audio-lingual), it was felt appropriate to use the F-Ratio.

Chi- Square. In contrast to measurement data, there are data expressed as classified frequencies. This means that the data are recorded in terms of the number of individuals who fall into each of two or more discrete categories.[7] Since an analysis of the attrition rate was a strict dichotomy of either the student dropped out or persisted in class, it was justifiable to use a chi-square analysis. Furthermore, it was nominal data, and this technique is the appropriate one to use with this type of data.[8]

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[4] Janet T. Spence, et al. Elementary Statistics, p. 99. New York, Appleton-Century-Crofts, New York, 1966.

[5] S. S. Stevens, "On the Theory of Scales of Measurement," Science, 103: 677-680, 1946.

[6] Ibid. Elementary Statistics, p. 147-67.

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[7] Ibid. Elementary Statistics, pp. 167-180.

[8] Ibid. "On the Theory of Scales of Measurement," pp. 677-680.

ANALYSIS AND PRESENTATION OF TEST RESULTS

Overview

The four student performance measurement devices described on the following page were treated statistically in order to judge the effectiveness of the Por Fin curriculum relative to the curriculum used in the control group. Both within-group and between-group analyses were done. The results of these comparisons follow. In addition, other variables which can be quantified are subjected to statistical analysis.

Passive Language and Math Test

Between-Group Comparisions. One analysis consisted of a T-Ratio test for each of Levels I, II, and III. The purpose of this analysis was to compare the Experimental with the Control group performance based upon the post-test scores on the Passive Language and Math Test, referred to hereafter simply the post-test. For Level I, statistical findings show a post-test mean of 75.0 with a standard deviation of 22.4 for the experimental group and a post-test mean of 81 with a standard deviation of 25.0 for the control group (Table 1).

As can be readily seen, a t = .555 was non-significant at the .05 level with degrees of freedom - df = 29.

Table 1

T-Ratio Analysis Experimental vs. Control Group

Level I

Groups	Post Mean Score	Standard Deviation	df	t
Experimental	75	22.4	29	.555 NS @ .05
Control	85	25		

These results can be attributed in part to the fact that during the course of the study the Control group had an attrition rate of 85.6% while the Experimental group's drop-out rate was only 35.0%. A chi-square analysis (Table 2) shows a significant difference in drop-out rate $-X^2 = 19.98$ with df=1. A plausible explanation could be that those 14.6% of the control group that persisted in the program, as compared to 65% in the Experimental group, were those that were highly motivated and hence through their own tenacity and resourcefulness outperformed the Experimental group Level I students. Further inquiry needs to be done in this problem area utilizing a research design that makes allowances for extraneous variables such as students' personal motivation, mental maturity and usage of residual techniques for compensation of drop-out rate.

Table 2

Chi-Square Analysis on Student Retention

Experimental vs. Control Group

Level I

Groups	Persisted	Dropped	Total
Experimental	25	14	39
Control	6	34	40
Total	31	48	79

Table 3 shows a post-test mean of 113.4 with a standard deviation of 17.1 for the Level II Experimental group and a post-test mean of 101.0 with a standard deviation of 16.8 for the Level II Control group. A t=2.175 was significant at the .05 level of probability with df-19. This time a chi-square ananlysis, x^2=.249 with df=1, on student retention (Table 4) was non-significant at the .05 level.

Table 3

T-Ratio Analysis for Experimental vs. Control Groups

Level II

Groups	Post Mean Score	Standard Deviation	df	t
Experimental	113.4	17.1	19	2.175 t .05
Control	101.0	16.8		

Table 4

Chi-Square Analysis on Student Retention

Level 2

Groups	Persisted	Dropped	Total
Experimental	7	14	21
Control	14	21	35
Total	21	35	56

Results (Table 5) of the T-Ratio test for Level III shows a post-test mean of 141.4 with a standard deviation of 7.1 for the Experimental group and a post-test mean of 119.3 with a standard deviation of 3.7 for the Control group. Again a chi-square analysis (Table 6) on student retention, $x^2=.466$ with df=1, indicated non-significance in the attrition rate for the Experimental vs. Control group for this particular level.

Table 5

T-Ratio Analysis for Experimental vs. Control Group

Level 3

Groups	Post-Test Means	Standard Deviation	df	t
Experimental	141.4	7.1	28	3.87 t .01
Control	119.3	3.7		

Table 6

Chi-Square Analysis on Student Retention

Level 3

Group	Persisted	Dropped	Total
Experimental	10	12	22
Control	20	34	54
Total	30	46	76

Within-Group Comparisons. The preceding analyses were based on the post-test cumulative score for the Experimental and Control groups. Within-group T-Ratio tests, using non-cumulative scores, were also performed for each of the levels of both the Experimental and Control groups. These analyses were based on pre- and post-test scores obtained from each level.

At this time it would be beneficial to digress from the main point of discussion and recapitulate some of the salient internal characteristics of the pre-post test that was utilized. The testing instrument that was administered to the experimental and control groups was divided into four distinct parts, one of which was designed to measure the overall mathematical abilities of both groups, while each of the other three sections dealt exclusively with materials that were felt appropriate for a particular level. The structure of the test was such that each succeeding section was more difficult to work than the preceding one. Hence, Level III students would be expected to complete Level II material but not conversely; that is, Level II students were not expected to work Level III problems.

This being the case, the Project findings were treated statistically on the basis of parallel- and single-group separations. For the parallel method, two groups of subjects were used; one was treated to the Por Fin curriculum, while the other group was exposed to the traditional methods and materials that were being used in the regular adult education classes. Each level in the Experimental group was compared to its equivalent level in the Control group. Results of this endeavor are presented in the first part of the "sampling statisitcs" section of this report. To complement this analysis, a "single-group method" of observation was also employed. That is, each group was tested for significance of difference in performance at time of entry and exit into the project.

Even though the statistical findings for Level I Experimental vs. Control group were non-significant, a separate analysis of these groups shows quite different results. The Experimental group has a non-cumulative pre-test mean of 40.2 and a post-test mean of 45.0, with a post-test standard deviation of 2.2. The Control group had a pre-test mean of 45.3 and a post-test mean of 43.7, with a standard deviation of 2.6. It is interesting to note (Table 7) that the Control group actually decreased in mean value. The pre- versus post-test comparison for the Experimental group yielded a t=4.13, which was singificant at the .01 level of probability, while a similar comparison on the Control group with a t=1.09 was non-significant at the .05 level.

Table 7

T-Ratio for Experimental and Control Group

Non-Cumulative Scores

Level 1

Groups	Pre-Test Mean	Post-Test Mean	Post-Test Std. Dev.	t
Experimental	40.2	45.0	2.2	4.13 t >.01
Control	45.3	43.7	2.6	1.09 NS @ .05 level

As previously indicated, Level II students in the Experimental group did substantially better on the post-test cumulative-scores analysis than did the Control group; but a comparision of Level II groups using non-cumulative scores shows slightly different results. As depicted on Table 8 the Experimental group had a pre-test mean of 11.4 and a post-test mean of 15.0, with a post-test standard deviation of 2.05; while the Control group had a pre-test mean of 11.6 and a post-test mean of 14.1 with a post-test standard deviation of 1.66.

Table 8

T-Ratio for Experimental and Control Group

Non-Cumulative Scores

Level 2

Groups	Pre-Test Mean	Post-Test Mean	Std. Error of Diff. Between Means	t	
Experimental	11.4	15	2.05	1.26	7
Control	11.6	14.1	1.66	2.60	13

In comparing the overall performance of the Experimental and Control groups for Level III, significant difference at the .01 level was found to exist between the means of the two groups. A closer analysis of both groups (Table 9) shows slightly different results.

The Experimental group had a pre-test mean of 36.2 and a post-test mean of 39.4, with a standard error of the difference between means of 1.68; while the Control group had a pre-test mean of 32.5 and a post-test mean of 35.0, with a standard error of the difference between means of 2.39. A T-Ratio of 1.05 for the Control group was found to be non-significant. The Experimental's group t of 1.90 was also non-significant at the .05 level.

Table 9

T-Ratio for Experimental and Control Group

Non-Cumulative Scores

Level 3

Groups	Pre-Test Mean	Post-Test Mean	Std. Error of Diff. Between Means	t	N
Experimental	36.2	39.4	1.68	1.90	10
Control	32.5	35.0	2.39	1.05	11

Self-Concept Rating Scale

Heretofore the statistics that were being used to analyze the Por Fin data were based on the assumptions that the vaiables that were measured were normally distributed in the population from which the samples were obtained. Because the reliability of the rater had not being taken into consideration at the outset of the project, it was felt that non-parametric techniques-which make no use of parametric values and which are based on less restricting assumptions than those underlying parametric ones concerning the shape of the distribution of the characteristics being measured-would best be utilized in examining the data obtained from the self-concept scale.

The Inferred Self-Concept Scale, developed by Dr. E. L. McDaniel of Southwest Texas University, was used in gauging the attitudinal changes that had occurred within the Experimental and Control groups as well as the comparison of changes in attitude that had taken place between these two groups. The Wilcoxon Signed-Ranks Test was employed to compare distributions consisting of matched groups. That is, it was used for within-group comparison. Each level in both groups was rated at the onset of the testing period and at the end of the testing period. For purposes of quantification, the scale was divided into two sections: those categories which showed improvement as one moved up the scale and those which showed improvement as one moved down the scale. In reference to the degree of attitudinal change that occurred within each group, it was found that the Experimental group Level I with a T of 68 was significant at the .05 level of probability, while the Control group Level I with a T of 4 was non-significant at the same level of probability. Experimental group Level II had a T of 0 which was significant at the .01 level, while the same level in the Control group had a non-significant T of 27.5. A T of 12.5 and 53.5 for Level III Experimental and Control groups respectively was found to be non-significant. Results of these analyses are found in Tables 10 through 12.

A Mann-Whitney U-Test was also performed for all levels--Experimental vs. Control group. This was the between-group comparison for testing at the same time. As shown in Tables 13 through 15, the attitudinal change that occurred was non-significant at the .05 level of probability for any level in either group.

Within-Group Comparison

Wilcoxon Signed-Ranks Test

Experimental and Control Group

Table 10

Level I

Groups	N	Ns-R	T
Experimental	25	25	68 .05
Control	6	6	4 N.S. @ .05

Table 11

Level II

Groups	N	Ns-R	T
Experimental	7	7	0 .01
Control	14	13	27.5 N.S. @ .05

Table 12

Level III

Groups	N	Ns-R	T
Experimental	10	8	12.5 N.S. @ .05
Control	20	18	54.5 N.S. @ .05

Between-Group Comparison

Mann-Whitney U-Test

Experimental Group vs. Control Group

Table 13

Level 1

Groups	N	R	U	Ue	N_1N_2	u	
Experimental	25	435	40	75	150	19.95	1.75 N.S. @ .05
Control	6	61	110				

Table 14

Level 2

Groups	N	R	U	Ue	N_1N_2	u	
Experimental	7	98.5	27.5	49	98	13.29	1.6 N.S. @ .05
Control	14	132.5	70.5				

Table 15

Level 3

Groups	N	R	U	Ue	N_1N_2	u	
Experimental	10	154.5	100.5	100	200	22.5	.022 N.S. @ .05
Control	20	310.5	99.5				

Table 16

Analysis of Variance

Source of Variation	SS	df	MS	F	P
Between-Groups	42,881	5	8576.20	32.36	.01
Within-Groups	20,083	76			
Totals	62.964	81			

Finally an analysis of variance--which is a statistical method that provides an objective criterion for deciding whether the variability between-groups is large enough in comparison with the variability within-groups to justify the inference that the arithemetic means of the population from which the different groups were drawn are not alltthe same--depicts a large variation with reference to the sum of mean squares between-groups and the sum of mean squares within-groups. The sum of mean squares (MS) between-groups was 8576.20 whereas the MS within-groups was 264.60. Hence an F-Ratio of this magnitude--F=32.36 at the .01 level of probability with df=81--indicates the difference in performance of the various groups in both the Experimental and Control groups could not have occurred by chance. In part this difference can be attributed to the effect of the Por Fin curriculum.

Language Proficiency Rating Scale

The Language Proficiency Rating Scale was intended to give an indication of active-language proficiency. It was developed by the Language School at Lackland Air Force Base for use with non-American trainees and was adapted for use in this experiment

As with any rating scale, the results must be viewed with some skepticism. The subjective bias of the teacher or differences in interpretation of the categories could make notable differences in the ratings assigned. For at least some of the Control group students, scales were filled out by someone other than the teacher. Again, the results could have been affected.

The results have been separated by levels into the Por Fin Experimental group and the Control group.

The tables below show a rating at the beginning of the test period and one at the end of the period for all students who completed the courses of study. The average score in each section is shown. The increase column reflects the difference between the first and second rating.

The table shows that in most instances there was very little difference between the two groups. The Experimental group did better in three of four categories in Level I, one of four in Level II, and one of four in Level III. However, differences were not great enough to warrant concern in any direction. The factors mentioned above could more than off-set any differences. Almost all categories in both groups showed improvement.

There also seems to be a direct correlation between starting levels and amount of increase. For example, Por Fin Level I showed more increase than Control Level 1. Por Fin also had a lower first-round rating Level I. Conversely, Por Fin Levels II and III showed less increase than Control Levels I and II. At the same time, first-round ratings were higher in the Por Fin group. It appears possible that the higher the initial ratings, and thus the less room for improvement, the lower the amount of improvement there actually is.

Natually the question of replicability arises. On the basis of the sample, it must be stated that a replication of this portion of the study could produce very unsimilar results. Although overall average improvement was greater for the Experimental group, no linkages can be maintained under close scrutiny as to the efficacy of either the Por Fin curriculum or traditional curriculum. Any cognate studies should place a greater emphasis on measuring active-language skills. While it is not recommended that the Language Proficiency Rating Scale be abandoned, it is suggested that tighter controls be maintained on those filling in the scales and that new devices be utilized to augment the findings.

LANGUAGE RATING SCALE
LEVEL 1

	Experimental		Control		Improvement	
	Pre	Post	Pre	Post	Experimental	Control
Comprehension	1.75	2.71	1.81	2.53	0.96	0.72
Speaking	1.67	2.38	1.56	2.28	0.71	0.72
Reading	1.33	2.54	1.63	2.22	1.21	0.59
Writing	1.08	2.25	1.59	2.13	1.17	0.54
	N= 24		N= 32			

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LANGUAGE RATING SCALE
LEVEL 2

	Experimental		Control		Improvement	
	Pre	Post	Pre	Post	Experimental	Control
Comprehension	2.83	3.83	2.47	2.87	1.0	0.40
Speaking	2.67	3.33	2.27	2.93	0.66	0.66
Reading	2.50	2.50	2.07	2.33	-0-	0.26
Writing	2.33	2.50	2.20	2.60	0.17	0.40
	N= 6		N= 15			

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LANGUAGE RATING SCALE
LEVEL 3

	Experimental		Control		Improvement	
	Pre	Post	Pre	Post	Experimental	Control
Comprehension	3.82	3.82	2.33	3.25	-0-	0.42
Speaking	3.18	3.64	2.58	3.05	0.46	0.47
Reading	3.18	3.72	3.00	3.50	0.54	0.50
Writing	2.73	3.00	2.83	3.42	0.27	0.59

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OVERALL CHANGE
ALL LEVELS

	Experimental	Control
C	.65	.51
S	.61	.62
R	.58	.45
W	.54	.51

SOCIAL FUNCTION TEST
EXPERIMENTAL VS. CONTROL GROUP

	EXPERIMENTAL GROUP				CONTROL GROUP			
Level	1st Avg.	2nd Avg.	No.	Improvement	1st Avg.	2nd Avg.	No.	Improvement
I	8.5	15.4	24	6.8		11.8	23	
II	10.0	13.9	6	3.9		11.9	12	
III	14.0	22.4	11	8.4		10.0	5	

Social-Functioning Test

Although all the students involved in the social functioning test showed improvement between pre- and post-testing, there were certain discrepancies which preclude full presentation of statistics and therefore full discussion and comparison. Although there were several factors underlying this area of difficulty, the primary source of invalidation was the fact that duplicate pre-tests were submitted for a number of the students in the control sample, this making it impossible to record a single valid score for each person. For this reason, only post-test scores are presented for the control-group students. Persual of these figures reveals two salient aspects. First, the final scores for the control group were not as high as those for the experimental group, although no test of significance could be made on the differences inasmuch as the statistics are incomplete and not of a type suitable for such a test. Secondly, scores for all three levels were much the same.

For the experimental group, scores were within a close range for Levels I and II on both pre- and post-tests, with a much higher average score for Level III students in both cases. There were high percentages of improvement for the three levels at 81% for Level I, 39% for Level II, and 60% for Level III. The gap between final scores for the control and experimental samples was particularly pronounced for Level III.

Questionnaires

Overview

Por Fin III distributed various questionnaires in an effort to ascertain the thoughts and opinions of the students, teachers, and administrators of both the control and experimental groups. A few of the questions on the teacher questionnaire and the administrator questionnaire were similar; for example, the teachers and administrators were both queried on their educational and teaching experience, as this is relevant in both cases.

Another opinion requested of the teachers and administrators concerned the appropriateness of the curriculum. Occasionally teachers may not be satisified with curriculum provided in their particular center but are forced to use it because of administration decisions. On the other hand, the teachers and administrators may have good rapport and agree on the curriculum furnished. Note has been made in the narratives below of differences in responses.

Although some of the questions were similar, most of the questions asked of the administrators were demographic, whereas most of those asked of the teachers requested opinions about instructional matters.

The teacher questionnaire requested a description of the method used in teaching (lecture, tutoring, use of programmed material, group discussion, etc.). This was utilized to compare the methods employed by both groups.

Another question included in the teacher questionnaire required the teachers to list what they thought were some of the students' objectives. The inclusion of this question would allow for a comparison of what the teachers thought the students' objectives were and the actual stated objectives of the students.

The student questionnaire was oriented toward gauging student opinions of classes and curriculum. Again, note has been made in the narratives of differences in impresions between the groups. Because of limited space only those questions whose response were deemed to be most significant were analyzed.

Student Questionnaire

Demographic Data. The preliminary section of the student questionniare elicited demographic information. The chart which follows depicts the breakdown of the data for both the Experimental and Control groups with respect to age, sex, and language-culture composition. As shown on the chart, these subjects in the experimental group were under twenty-one years of age with two being male and one female; while the control group had a total of four subjects classified in this age bracket with three being female and one male.

As can be readily seen, in the twenty-two through forty-five year age class interval, the experimental group was evenly divided; while the control group had ten female students and only 3 male students. In the forty-six year or older age bracket, the Experimental class consisted of two male and twelve female. The Control group was more evenly dispersed, eight being male and eleven female.

Finally, the language-culture classification of students, the Experimental and Control groups had 35 but 34 Spanish-speaking student respectively.

The relative percentages of males to females and one age group to another are favorably consistent with national norms for adult education. The Experimental group was slightly younger than the Control groups, but generally speaking, they were quite comparable. Nearly all participants in both groups were Spanish-speaking, a situation consistent with the intent of the project. Since no unusual factors were revealed here, no particular inference need be made about the answers given subsequently; they can be taken to be those of a representative sample.

DEMOGRAPHIC DATA

	EXPERIMENTAL		CONTROL	
AGE	Male	Female	Male	Female
below 21	2	1	1	3
22-45	9	9	3	10
46 +	2	12	8	11
LANG./CULTURE				
Span. Speaking	35		34	
Non-Span. Speaking	0		2	

Reasons for Coming to Class. The first question the students were given concerned their reasons for coming to class. Graph 1 depicts the various factors given by the students as being their major reasons for attending class. It can be seen that this distribution is multi-modal with 62.1% of the respondents expressing a desire to get more education as well as to improve their life style. A comparison between Experimental and Control groups shows a high homogeneity in response to this variable. Nevertheless, a chi-square analysis shows not significance in the differences in responses expressed by both the Control and the Experimental gro groups. Chart #1 provides a breakdown in terms of percentage of total responses between Experimental and Control groups.

It is interesting to note that, although on many items both groups were in almost complete agreement, 62.1% of the Experimental group expressed a desire to improve themselves, whereas only 17.4% of the Control group expressed such a similar desire. This disparity could possibly be attributed in part to the affective aspects of the curriculum. For whatever reason, this group exhibited extended motivation. In contrast with the Control group which wanted primarily language skills, the majority of this group wanted to acquire language skills plus more education and general self-improvement. This means that they did not at this point aligh with the previous year's finding,[9] which showed a single major emphasis on language. The Control group was consistent with those findings at this time but the Experimental group was not.

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[9] Ibid. An Indepth Study........, pp. 32-33

Graph 1. Reasons for Coming to Class

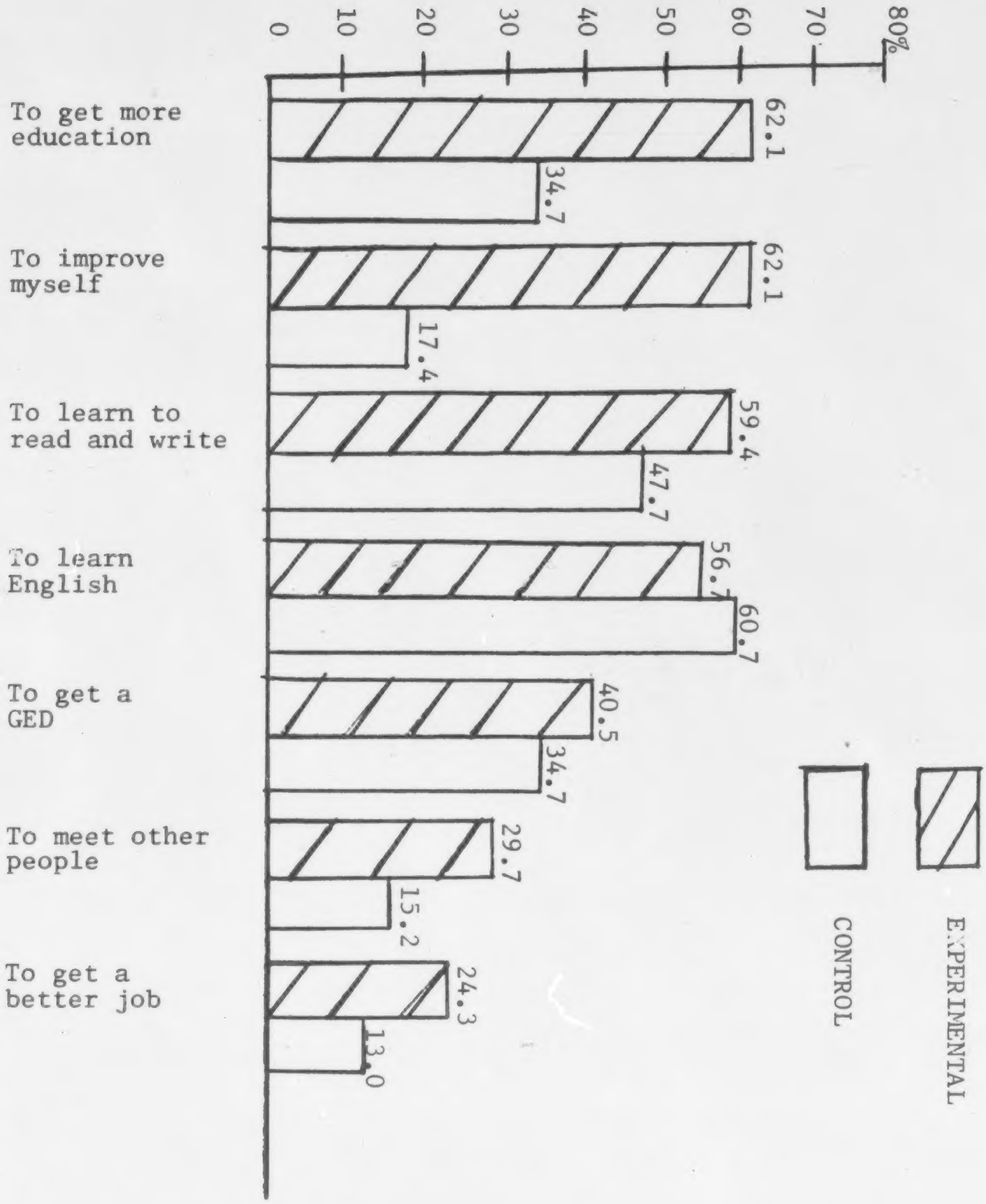

Chart 1

1A. Why did you come to class?

	Experimental Group		Control Group	
	#	%	#	%
A. To learn English	21	56.7	28	60.7
B. To get more education	23	62.1	16	34.7
C. To improve myself	23	62.1	8	17.4
D. To learn to read and write	22	59.4	22	47.7
E. To get a GED	15	40.5	16	34.7
F. To get a better job	9	24.3	6	13.0
G. To meet other people	11	29.7	7	15.2
	N=36		N=46	

1B.

Groups	To learn English	To get more education	To improve myself	To learn to read & write	To get a GED	To get a better job	To meet other people	Totals
Exp. Group	21	23	23	22	15	9	11	124
Cont. Group	28	16	8	22	16	6	7	103
Totals	49	39	31	44	31	15	18	227

$x^2 = 9.76$ df = 6 N.S. @ .05

1C.

	To learn English	To get more education	To improve myself	To learn to read & write	To get a GED	To get a better job	To meet other people
Exp. Group	16.9%	18.5%	18.5%	17.7%	12.1%	7.4%	8.9%
Cont. Group	27.2%	15.5%	7.8%	21.4%	15.5%	5.8%	6.8%

Ways to Change the Class. This graph depicts opinions as expressed by the students in the two groups. An interesting notation is the amount of people who wanted new teaching materials. Only twelve percent wanted new materials in the Experimental group, while 39% of the Control group wanted new materials. The use of the experimental curricula and teaching methodology used by the Experimental group could have something to do with the low percentage of the Experimental group desiring change.

Another implication that could be made from this graph regards the question on more class time. Seventy percent of the Experimental group wanted more class time, while only 11% of the Control group wanted more. It must be noted, however, that some of the Control studies had more exposure to begin with. The methodology and curricula used could again be the reason for such high percentages in the Experimental group. It was also interesting to note that 30% of the Experimental group marked the column for "Other." There was only one category--all ten respondents wanted to continue classes. Due to the caliber of teachers, teacher methodology, and curricula, these students were satisfied that they had learned and would learn a lot more if they were able to continue classes at Por Fin. None of the respondents in the Control group stated anything about continuation of classes. Responses such as these lend support to the thesis that the experimental curricula generated satisfaction and positive motivation on the part of the students involved with it.

Graph 2. How Would You Change the Class?

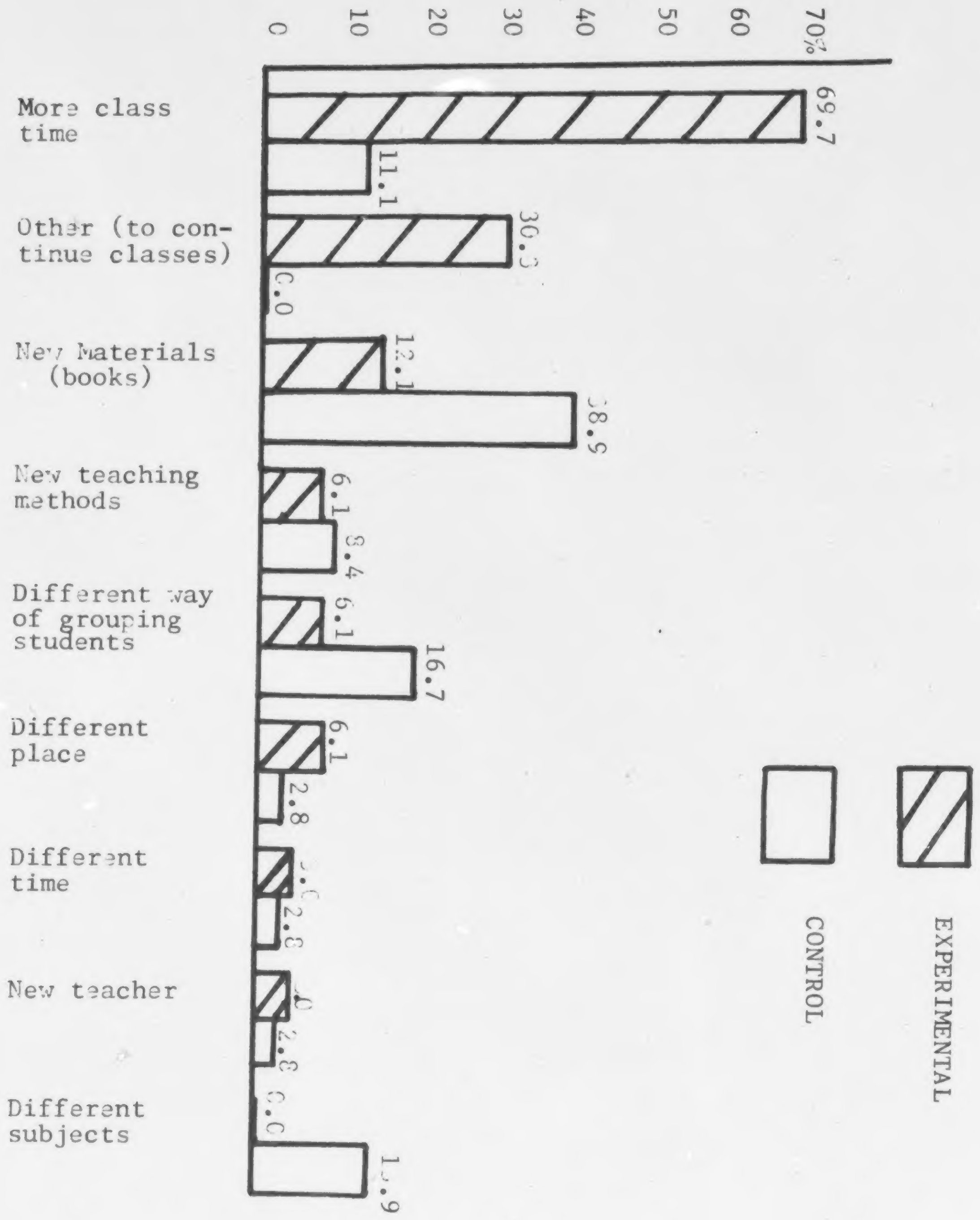

Chart 2

How would you change the class?

	Experimental Group #	%	Control Group #	%
A. New teacher	1	3.0	1	2.8
B. New materials (books)	4	12.1	14	38.9
C. New teaching methods	2	6.1	3	8.4
D. Different way of grouping students	2	6.1	6	16.7
E. Different place	2	6.1	1	2.8
F. Different time	1	3.0	1	2.8
G. Different subjects	-	-	5	13.9
H. More class time	23	69.7	4	11.1
I. Other (to continue classes)	10	30.3	-	-
	N = 33		N = 36	

Asking For Help From The Teacher. Graph #3 of the student questionnaire depicts what the experimental curriculum and teacher methodology might do to let students express themselves without fear of being corrected. Although the responses were not extremely different for the two groups, the Experimental group students did answer more favorably on several points. First of all, 100% answered that they would ask their teachers for help with their classwork. In the Control group, 84% answered that they would ask their teachers for this type of help.

Besides asking for assistance on their classwork, 19% of the Experimental group asked assistance of their teachers about their jobs and their personal plans for themselves. This is a noticably higher percentage than that for the Control group and is an important finding. These are factors that interrelate highly with educational goals[10] and as such, are most significant when integrated into the learning fabric by the teacher. Eleven percent (11%) asked for help with their family problems, but this is not significant different from the 9% of the Control group students who would react similarly. It would see, however, that the experimental curriculum approach helped more students overcome the fear of being rejected by the instructor when asking these types of questions or requesting this type of help.

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[10] Ibid. An Indepth Study......., pp. 35-36.

Graph 3. Have You Ever Asked Your Teacher For Any Help?

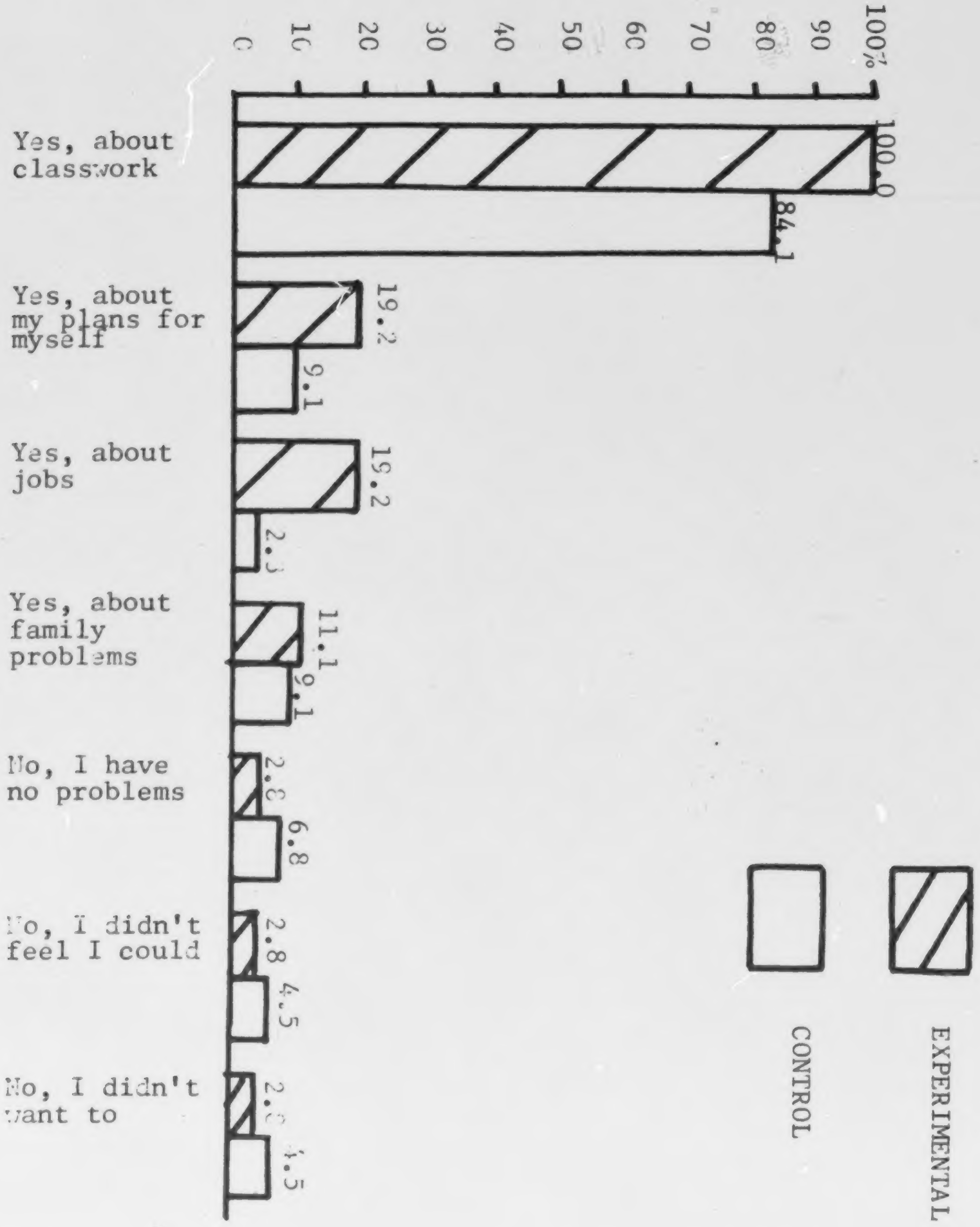

Chart 3

Have you ever asked your teacher for any help?

	Experimental Group		Control Group	
	#	%	#	%
A. Yes, about classwork	36	100.0	37	84.1
B. Yes, about jobs	7	19.2	1	2.3
C. Yes, about family problems	4	11.1	4	9.1
D. Yes, about my plans for myself	7	19.2	4	9.1
E. No, I have no problems	1	2.8	3	6.8
F. No, I didn't feel I could	1	2.8	2	4.5
G. No, I didn't want to	1	2.8	2	4.5
	N = 36		N = 44	

Evaluation Of The Subjects Being Studied. Chart 4A on the subjects the students studied depicts overall that most of them in both groups enjoyed the classes they were attending. The subject categories used were the standard academic areas. The responses for English areas comparing the Control and Experimental groups, did not show any great difference. The Experimental group totalled 95.2% answering that English was good to very good. The Control group totalled 95.1% answering that English was good to very good.

Math did show a greater difference in total percentages. The Experimental group answered 65% of the time that this subject was good to very good. The Control group totalled 88.2% good to very good. The intermediate levels in the Experimental group were instructed more nearly equally in all subjects but the lower levels, especially the ESL levels, were not taught much math at all. This generally held true for the Control group as well.

Science also showed some difference between the groups. The Experimental answered 83.4% good to very good, while the Control group answered 60.0% good to very good. The experimental curricula data with science subjects students could relate to and use in their daily lives and handled them in an audio-lingual setting. The control curricula science lessons consisted of workbooks for reading and writing practice.

In history 100% of the Experimental group rated the subject well, as opposed to 69.3% of the Control students. The results were similar for reading, where 100% of the Experimental group rated the area well in contrast to 83% of the Controls. Notably the areas that were different were the history, science, and reading areas which are integrated into the oral English curriculum. The Experimental group achieved really higher scores in these areas, whereas generally other responses were somewhat similar to those for last year.[11]

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[11] Ibid. An Indepth Study......., pp. 37-38.

Chart 4A

How do you like the subjects you are studying?

	Experimental Group		Control Group	
	#	%	#	%
A. English				
1. Very good	25	70.0	33	80.5
2. Good	9	25.2	6	14.6
3. Fair	0	-	2	4.8
4. Bad	0	-	0	-
5. Very bad	0	-	0	-
	N = 34		N = 41	
B. Math				
8 1. Very good	10	50.0	7	44.1
2. Good	3	15.0	7	44.1
3. Fair	2	10.0	1	6.3
4. Bad	4	20.0	1	6.3
5. Very bad	1	5.0	0	-
	N = 20		N = 16	
C. Science				
1. Very good	5	41.7	3	20.0
2. Good	5	41.7	6	40.0
3. Fair	2	16.7	6	40.0
4. Bad	0	-	0	-
5. Very bad	0	-	0	-
	N = 12		N = 15	
D. History				
1. Very good	6	66.7	4	25.2
2. Good	3	33.3	7	44.1
3. Fair	0	-	5	31.5
4. Bad	0	-	0	-
5. Very bad	0	-	0	-
	N = 9		N = 16	
E. Reading				
1. Very good	25	87.5	19	60.8
2. Good	4	12.5	7	22.4
3. Fair	0	-	5	16.8
4. Bad	0	-	0	-
5. Very bad	0	-	0	-
	N = 29		N = 31	
F. Other (writing)	10		-	

Chart 4B

How do you like the subjects you are studying?

English	Very Good	Good	Fair	Bad	Very Bad
Experimental Group N=34	70%	25.2%	--	--	--
Control Group N=41	80.5%	14.6%	4.8%	--	--

Math	Very Good	Good	Fair	Bad	Very Bad
Experimental Group N=20	50%	15%	10%	20%	5%
Control Group N=16	44.1%	44.1%	6.3%	6.3%	--

Science	Very Good	Good	Fair	Bad	Very Bad
Experimental Group N=12	47.7%	71.7%	16.7%	--	--
Control Group N=15	20%	40%	40%	--	--

History	Very Good	Good	Fair	Bad	Very Bad
Experimental Group N=9	66.7%	33.3%	--	--	--
Control Group N=16	25.2%	44.1%	31.5%	--	--

Reading	Very Good	Good	Fair	Bad	Very Bad
Experimental Group N=29	87.5%	12.5%	--	--	--
Control Group N=31	60.8%	22.4%	16.8%	--	--

Preparation Time Outside Class. Graph #5 compares the Experimental and Control group, with the graph showing that the distribution in multi-modal with 47.3% of the respondents stating that they spent less than an hour outside of class preparing for it. Over 16% of the Experimental group said that they did not spend any time at all preparing for class. The more motivated students answered (36.2%) that they studied between one and three hours for the class. Only 2.8% of this group answered that they spent more than three hours preparing for class. The Control group had three students (6.9%) who spent more than three hours on preparing for class.

Twenty-seven point nine percent (27.9%) of the Control group respondents stated that they spend less than one hour preparing between one and three hours preparing for class was the time expended by another 27.9%. Thirty-five point two percent (35.2%) of these students spend no time at all preparing for class.

Apparently Experimental group students were spending slightly more time preparing for class than were those in the Control group. Again this situation may result from increased motivation in the experimental area, as this outside study was not required.

Graph 5. How Much Time Outside Class Did You Spend Preparing For Each Class?

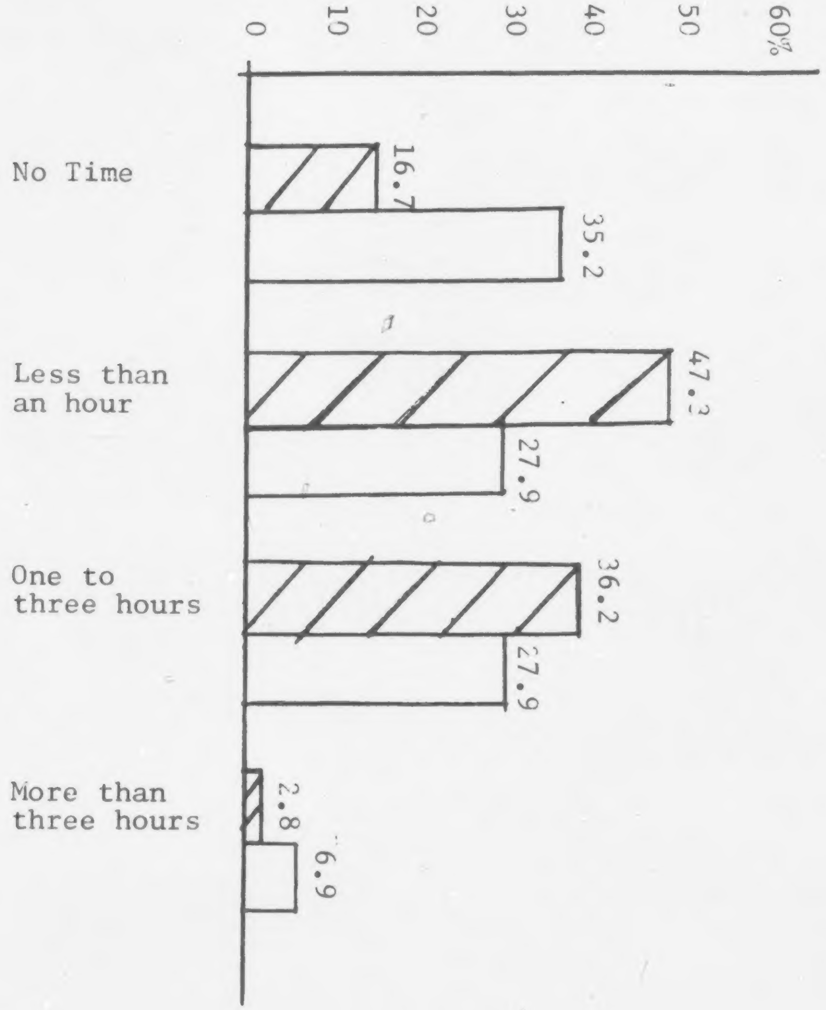

Chart 5

How much time outside class did you spend preparing for each class?

	Experimental Group		Control Group	
	#	%	#	%
A. No time	6	16.7	16	35.2
B. Less than one hour	17	47.3	12	27.9
C. One to three hours	13	36.2	12	27.9
D. More than three hours	1	2.8	3	6.9
	N = 37		N = 43	

Summary. The salient feature emerging from the analysis of responses to the student questionniare is in the psycho-social area, the increased motivation of the Experimental group students. In contrast to the other students, they were satisfied with their materials and wanted still more class time. Addition, they had expanded their original language-oriented goals to include the acquisition of further education and general self-improvement.

This motivation and goal expansion is reflected in more active participation on the part of these students. The retention was good, and they spent more time studying and preparing for classes than was required. Further, they sought help in jobs and family matters, making an effort to keep abreast of those problems that might normally impede them in access to their goals.

In reference to the subject-matter content itself, the Experimental students gave better ratings to the integrated approach used in the experimental materials. Science, history, and government were evidently of greater interest and clarity when integrated into a language base.

Teacher Questionniare

The teacher questionniare was used only at the end of the test period at the suggestion of consultant Carlene Truman. Its function was to compare attitudes and methods of Control and Experimental group teachers in order to gauge the importance of the instructor variable. In addition, use of this instrument would provide a basis for comparison of teacher attitudes with those noted on a similar questionniare used by Por Fin II.

Subjects Taught. The information presented in the following graph and chart is presented only for information. No strong inferences are possible inasmuch as most respondents marked more than one item, and a certain overlap is represented.

A major emphasis is reflected in language-related areas, however, which is consistent with previous findings. More instruction is given in these areas than in other academic subjects. These other subjects did receive a different sort of emphasis by the experimental teachers, however, which can be attributed to the integration of these areas with language. That meant that these areas could be covered without any loss of language study time. The control teachers show a slightly greater emphasis on grammar, possibly indicating a more formal and less conversational approach to language, in contradistinction with the findings of Por Fin II relative to students' strong preferences for acquisition of oral English facility.

GRAPH 1

Which subjects did you teach?

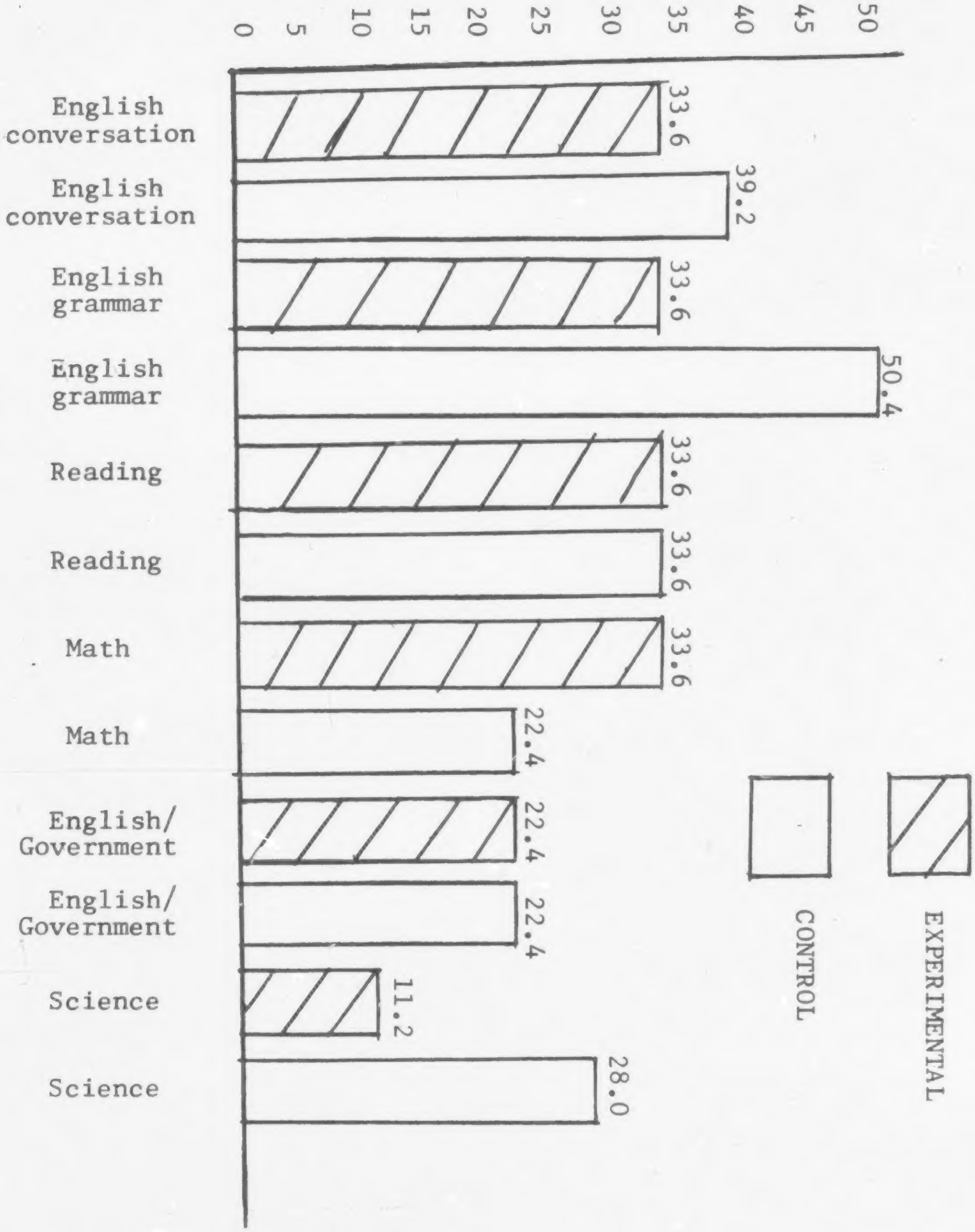

Chart 1

Which subjects did you teach?

	Experimental Group %	Control Group
A. English conversation	33.6%	39.2%
B. English grammar	33.6%	50.4%
C. Reading	33.6%	33.6%
D. Math	33.6%	22.4%
E. History/Government	22.4%	22.4%
F. Science	11.2%	28.0%
G. Other		
1. Literature	-	11.2%
2. Spanish	-	5.6%
3. Consumer Education	5.6%	-

Students' Objectives. According to this year's questionniare, teachers seem to have changed their opinion regarding the objectives of the students. The questionniare indicates that 75.8% of the instructors felt that their students wanted to obtain their GED, while last year's results showed over half the teachers thinking that the students wanted to attain oral facility in English. This means that there is a still greater lack of congruence between teachers' and students' perceptions of goals. Students in both studies gave major preference to language, with this year's experimental students adding further strong preferences for self-improvement and further education. These secondary areas indicates by Experimental students were born out by experimental teacher responses; but the language preference was not indicated as strongly by either group of teachers as it was by the students, reflecting both a continuing need for better communication between students and teachers in the area of goals determination and further strong support for the control permise of the experimental curriculum: an oral language core.

Student's Objectives

GRAPH 2

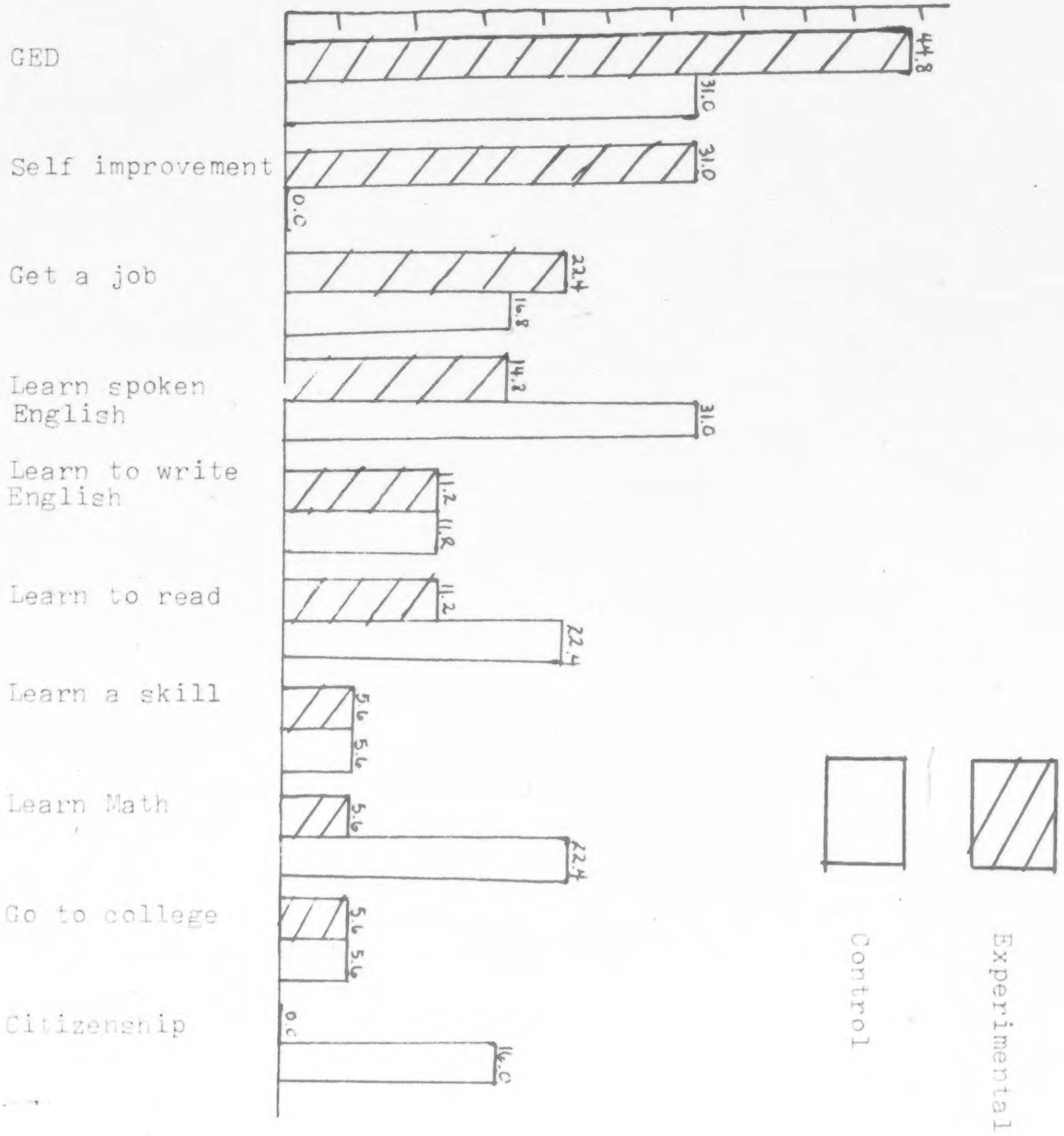

Chart 2

What are some of the objectives of your students?

	Experimental Group %	Control Group
A. GED	44.8	31.0
B. Self improvement	31.0	-
C. Get a job	22.4	16.8
D. Learn spoken English	14.8	31.0
E. Learn to write English	11.2	11.2
F. Learn to read	11.2	22.4
G. Learn a skill	5.6	5.6
H. Learn Math	5.6	22.4
I. Go to college	5.6	5.6
J. Citizenship	-	16.8

Appropriateness or Inappropriateness of the Present Curriculum to the Student's Needs?. Both the Experimental and Control groups felt overall that the curriculum being used was appropriate. Seventy-five percent (75%) of the respondents, in both groups, stated that the curriculum used presently was appropriate. However, some of the control respondents said that there were not enough subjects taught to give the students any variety. Others stated that the curricula for ESL was inadequate; they needed more to fulfill the needs of the students.

Greater satisfaction on the part the teachers with the materials they were using was reflected in this year's responses as compared to last year's. This might have been predicted and hoped for with the experimental teachers, who could see their assessment verified by their students. It reveals an interesting discrepancy in the control situation, however, for their students were revealing a certain dissatisfaction with their materials.

Chart 3

Do you think the present curriclum is appropriate or inappropriate to the student's needs?

	Experimental Group	Control Group
	%	
A. Yes, appropriate	75.0	90.0
B. No, inappropriate	25.0	20.0
C. No response	-	10.0

Adequacy or Inadequacy of the Present System of Placement. This items deals with the system of placement. Due to the structure of the item, several categories must be considered. Basically, the systems dicussed are placement by testing versus placement by last grade attained in schools. However, grouping for classes is also included.

Fourty percent (40%) of the respondents in the Control group concurred that testing was an adequate means of placement.

Thirty percent (30%) of the respondents felt that placement by testing is inadequate, citing the fact that testing tends to scare the student.

Thirty percent (30%) of the respondents indicated that placement according to last grade attained in school does not always present a true picture of the student, often resulting in over-placement or under-placement.

Eignty-seven percent (87%) of the respondents in the Experimental group stated that placement by level of competency combined with consideration of grade attained in school was adequate. (The level of competency was determined by administering a placement test to the in-coming students and letting them have a brief interview with the instructor).

It was indicated that this type of placement is adequate but that success is predicated upon the establishment of more groups at the different levels so that the student can be placed in that group in which he is really comfortable. Most particularly, the ESL students must be separated into two groups: those with prior education and those without. Placement and grouping are thus interrelated. This bears out findings from Por Fin II. There was some dissatisfaction with existing methods and a recommendation that the combined method currently advocated by the experimental teachers be adopted.

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GRAPH 4

Do you feel that the present system of placement is adequate or inadequate?

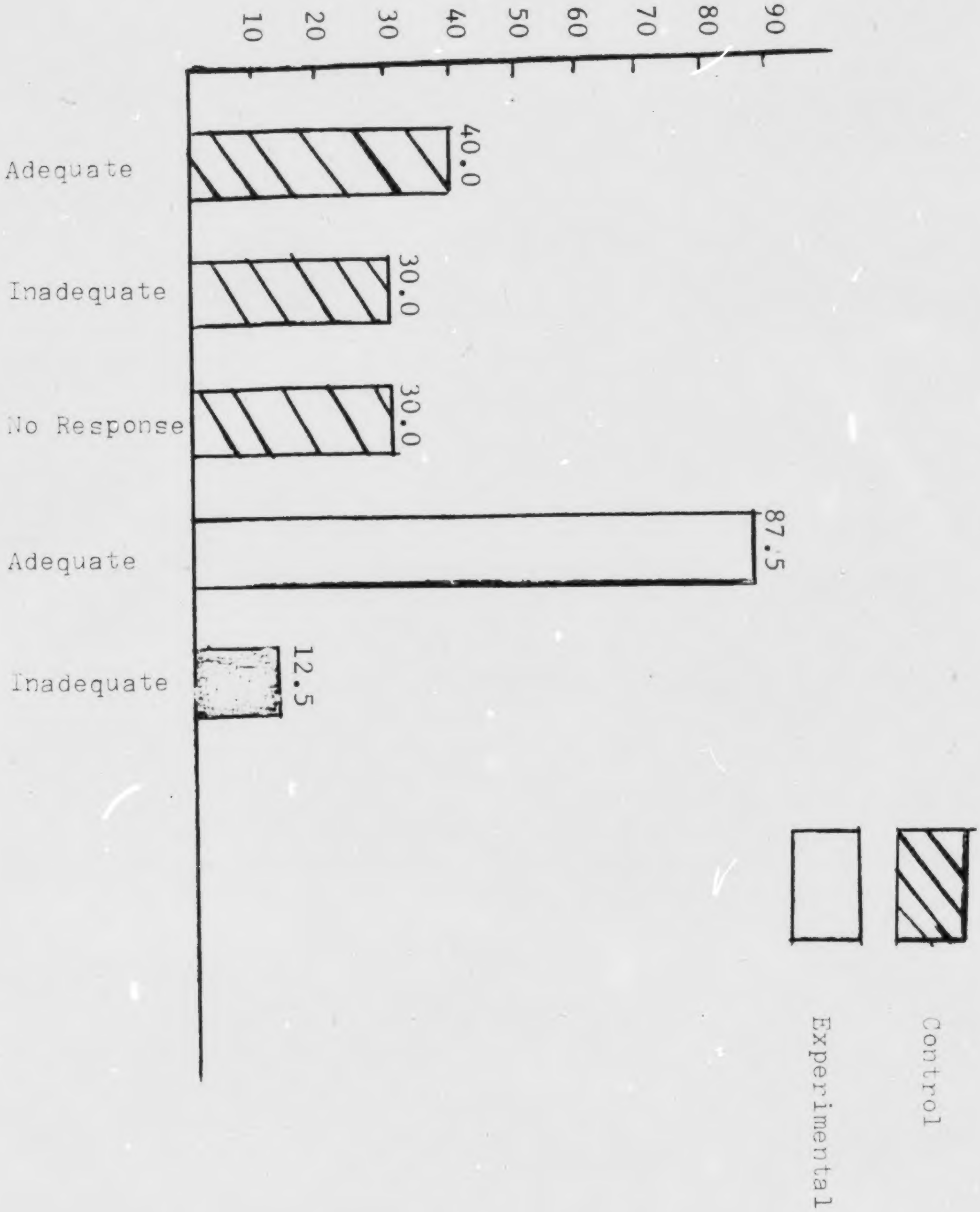


Chart 4

Do you feel that the present system of placement is adequate or inadequate?

	Control Group	Experimental Group
	%	
A. Adequate means of placement	40.0	87.5
B. Inadequate placement	30.0	12.5
C. No response	30.0	-
	N=18	

Personal Educational Experience. Predictably, the personal educational experience of ABE teachers was high. Graph 5 provides a breakdown of the ABE instructors' educational attainment, with an overwhelming of the respondents indicating college experience. Of these, 44.8% (22.4% in each group) had college degrees; and 5.6% had already received a graduate degree, 47.8% had at least two years of college, although the majority of these were experimental teachers.

It was interesting to find out that 70.2% of the respondents had attended workshops. Although teachers in the Control group did not have quite as much personal education as the teachers in the Experimental group, they were attending slightly more workshops than the experimental teachers were.

These results reflect a slightly lower educational attainment level for ABE teachers than that found by Por Fin II, particularly for the Control group. Although their finding is not directly involved with the thrust of the research, some consideration of this situation by the profession would seem warranted.

Chart 5

Personal Educational Experience

	Experimental Group	Control Group
	%	
A. High school diploma	31.0	16.8
B. 1-2 years of college experience	31.0	16.8
C. College degree	22.4	22.4
D. Attended workshops	31.0	39.2
E. Other		
1. Graduate degree	5.6	-
2. 3 years college	5.6	5.6
3. Specialized education	5.6	5.6

Teaching Experience. Based upon time duration as a criterion for measuring teaching experience, Chart 6, shows that more of the control instructors had been involved in adult education for more than two years, although the groups were fairly evenly matched on the number of teachers who had been teaching adult education classes for attleast six months but less than one year.

The other teaching experience of adult education instructors spans the whole spectrum of formal education. As Chart 7 depicts, many of the respondents have been engaged in elementary, high school, or university teaching. There were slightly more control teachers with no other teacher experience at all. More had their prior experience on other forms of education for adults.

Compared with the Por Fin II study, the results are encouraging in this area. More of the teachers had more other prior experience and more ABE experience than the sample previously surveyed.

Chart 6

Teaching Experience with ABE

	Experimental Group %	Control Group
A. 0 - 6 months	371/2	40
B. 7 months - 1 year	371/2	20
C. 13 months - 11/2 years	-	-
D. 19 months - 2 years	-	-
E. 25 months - over	25	40

Chart 7

Overall Teaching Experience

	Experimental Group %	Control Group
A. No previous teaching experience	81/3	162/3
B. Taught in elementary school	-	162/3
C. Taught in high school	81/3	25
D. Other		
1. Head Start	25	162/3
2. University teaching	25	-
3. U.S. Army teaching	25	81/3
4. Community schools	25	-
5. Seminars	81/3	-
E. No response	81/3	162/3

Teaching Methods. The next item provides a breakdown of the most prevalent teaching methods that are presently being utlized in each of the levels of instruction of those ABE classes that were studied. Tutoring, lecturing, use of programmed materials, group interaction, and the audio-lingual approach were considered.

The Control group teachers used tutoring a significant part of the time at all levels, whereas the group interaction audio-lingual approach dominated for the experimental teachers. From the standpoint of student goals in oral language learning, this finding is of import. Individual bookwork with some teacher assistance cannot allow for the interaction necessary for the practice and acquisition of oral language skills.

Further, from the standpoint of student retention, it is interesting to note that on examining the drop-out rate for Level I, the Experimental group had an attrition rate of 35.8%, while the Control group had a drop-out rate of 84.9%. A chi-square of x^2=19.98 (Chart 1) shows this to be significant at the .001 level of probability. This great difference in drop-out rate can possibly be attributed to the different teaching methods employed, as well as to the curriculum utilized.

These findings reflect a change from last year's results, which reflected the dominance of the lecture method. Obviously this is some improvement, as the individualized approach in tutoring is much more likely to meet some of the student's needs. Nevertheless, to meet his language goals, group interaction and audio-lingual methodology would have to be more extensively utilized.

Chart 8

What type of teaching methods do you use?

Control

Level I

A.	Lecture	30.0%
B.	Tutoring	60.0%
C.	Programmed material	30.0%
D.	Group interaction	40.0%
E.	Other (audio-lingual)	10.0%

Level II

A.	Lecture	-
B.	Tutoring	662/3%
C.	Programmed material	162/3%
D.	Group interaction	162/3%

Level III (GED)

A.	Lecture	30.0%
B.	Tutoring	60.0%
C.	Programmed material	30.0%
D.	Group interaction	30.0%

Experimental

A.	Lecture	12.5%
B.	Tutoring	25.0%
C.	Programmed material	12.5%
D.	Group interaction	37.5%
E.	Other (audio-lingual)	37.5%

Level II

A.	Lecture	100%
B.	Tutoring	100%
C.	Programmed material	-
D.	Group interaction	50%

Level III

A.	Lecture	37.5%
B.	Tutoring	12.5%
C.	Programmed material	12.5%
D.	Group interaction	37.5%

Materials Appraisal. Both Experimental and Control groups were asked if they had sufficient materials to teach their classes. Sixty percent (60%) of the Control group said they had sufficient material, while 100% of the Experimental group felt they had sufficient material. Therefore, while the Experimental group had sufficient material for the levels taught, some of the instructors in the Control group (30%) felt that the intermediate and lower levels needed more and different material to prepare a student going on to a higher level. This is relatively consistent with the findings of Por Fin II, where 38% of the teachers were dissatisfied with the quantity and quality of their materials.

It must be noted, however, that while the experimental teachers indicated total satisfaction with their materials, there is another aspect to be considered. This materials may have been totally satisfactory each module within itself for the coverage it afforded of a particular topic and all the modules for the experimental time frame, but the Por Fin materials are of necessity but a token response to a need. While they are extensive, they are not comprehensive. No doubt the experienced teacher could suggest many other topics needing to be taught whose coverage and inclusion time did not permit.

Chart 9

I have sufficient and varied material to use for the class.

	Experimental Group %	Control Group
A. Sufficient material	100.0	60.0%
B. Insufficient material	-	30.0%
C. No material at all	-	-
D. No response	-	10.0

Summary. Several salient features emerge from appraisal of these responses. First, by integrating language and subject matter, greater coverage is possible in both categories, and the needs of the students. Second greater congruity should be achieved between teachers and students in terms of goal determination. Students indicate dissatisfaction and goals of which many of the teachers are apparently unaware.

Third, general implemination of a combination placement and grouping method should be considered. Some testing and interviewing as needed should combined with appraisal of previous schooling and life experiences. These approaches should then be used in conjuction with a more specialized grouping system for classes, particularly with separate categories for ESL students with and without prior formal education.

Fourth, the findings revealed less formal education and more teaching experience on the part of the teachers responding. Fifth, many control teachers reported extensive use of the tutoring approach, which is inconsistent with the students' oral language-learning goals. Finally, 30% indicated dissatisfaction with their materials, whereas the experimental teachers expressed total satisfaction.

Appraisal of these results suggests that by centering intruction around the students' language goals, integrating other material into the language study they want, and suiting the methods to this goal, a major portion of the dissatisfaction expressed by some students and teachers may be alleviated.

Administrator Questionniare

The third instrument used during the post-test period was the administrator questionnaire. It was used only during the post-test period as a suggested by Por Fin's consultant on evaluation, Ms. Carlene Truman. Data was gathered and analyzed by the Por Fin staff for future use. Half of the questions were demographic, and the other half dealt with opinions on areas of curriculum, methods, evaluation, and student needs.

Considering ABE Teaching Experience, 80% of ABE administrators in the sample who responded to this question had over 2 years of experience teaching in adult basic education. One respondent had between a year and a year-and-a-half of teaching experience. Therefore, the decision makers in ABE should be aware of problems in ABE since they probably taught before becoming administrators in this area. Administrators in Por Fin II's research did not have as much ABE classroom experience as those in the new sample.

The only change reflected between Por Fin III findings was a slight decrease in ABE teaching experience. This decrease reflected one new staff member who had slightly less experience in this category.

GRAPH I.

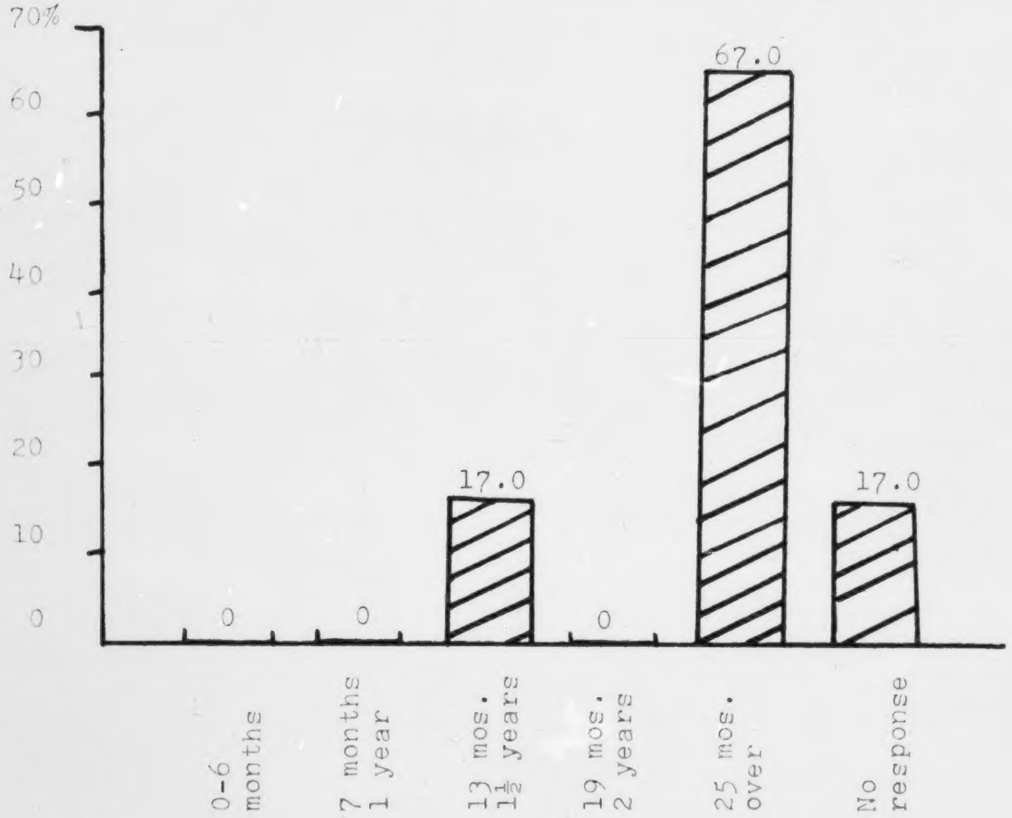


Chart 1.
ABE Teaching Experience

	%
0-6 months	0
7 months-1 year	0
13 months 1½ years	17
19 months-2 years	0
25 months-over	67
No response	17

Other Teaching Experience. A related question put before the administrators concerned their teaching experience other than that with ABE. Sixty-seven percent (67%) had taught high school, while seventeen percent (17%) had taught in college. Another seventeen percent (17%) had experience in teaching in parochial schools, and thirty-three percent (33%) of the administrators had taught in elementary schools.

These figures indicate that ABE administrators have a wide variety in their types of classroom experiences. While it cannot be assumed that the problems, methods, or solutions in adult education are the same as those in other areas, it is certain that non-ABE teaching experiences give further perspective of the education field in general and thus help to insure a more able administrative staff.

Non-ABE Teaching Experience

GRAPH II

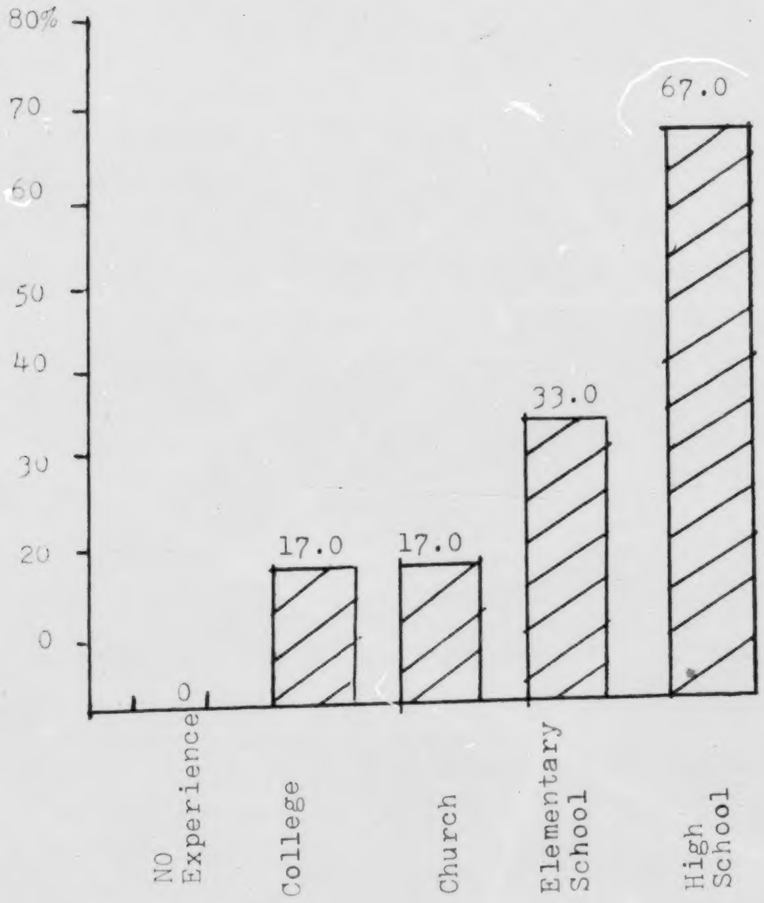


Chart II

Non-ABE Teaching Experience

	%
No experience	0
Elementary School	33
High School	67
Other	
College	17
Church	17

Personal Educational Attainment. The last demographic question answered by the ABE administrators concerned "personal educational experience". Compared to last year's findings, the personal educational experience of the administrators has increased. Eighty-three percent (83%) have one to two years of college experience; eighty-three percent (83%) have a college degree and workshop experience. Thirty-three percent (33%) of the administrators have done graduate work, and seventeen percent (17%) actually have a graduate degree. The overlap in responses obscures the data somewhat, but it appears that not all the administrators are degreed, even though all have prior teaching experience.

Personal Eduacational Attainment

GRAPH III

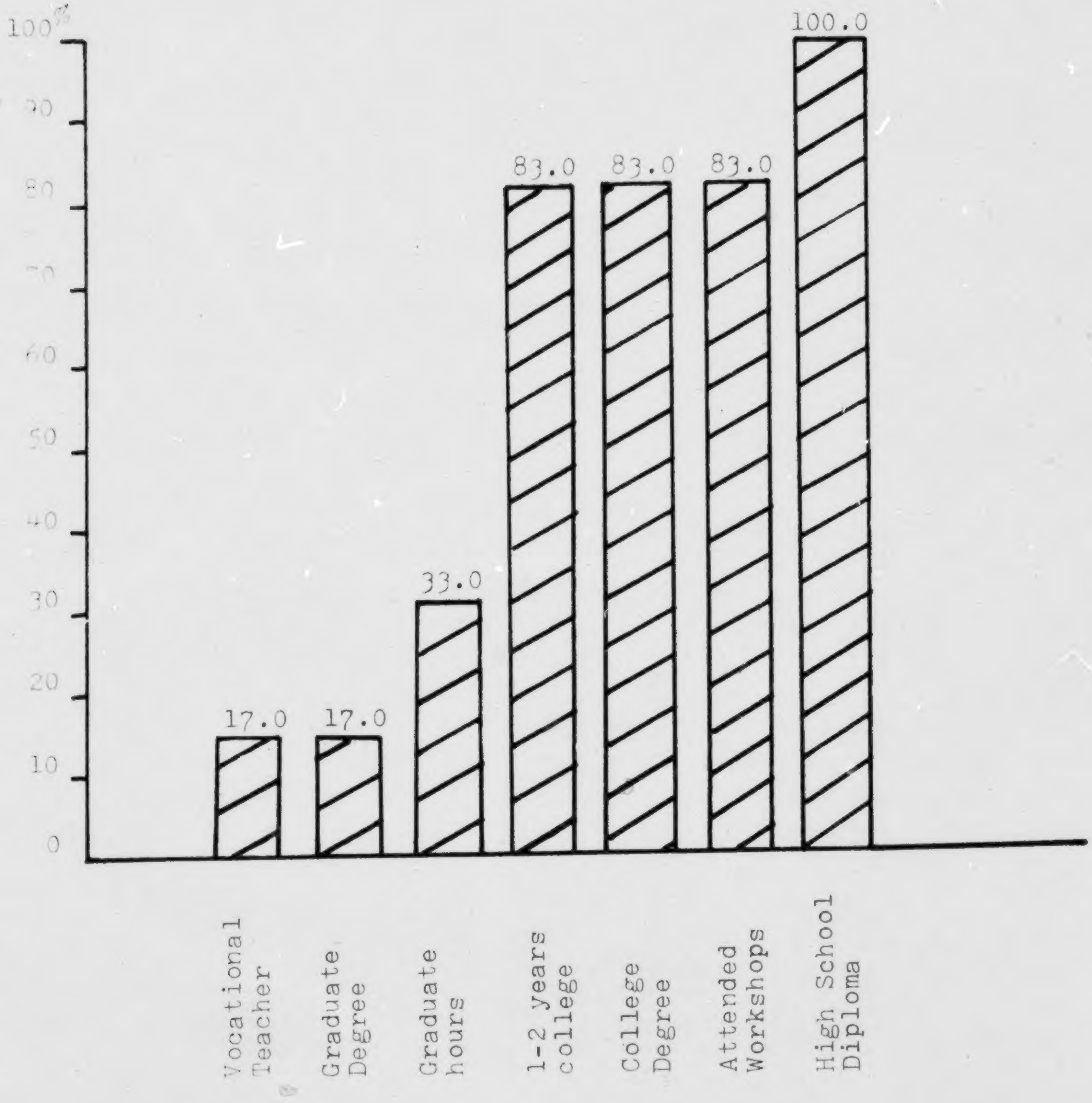


Chart III

Personal Eduacational Attainment

	100%
High School Diploma	83
1-2 years of college	83
College Degree	83
Attended Workshops	
Other	
Graduate Hours	33
Graduate Degree	17
Vocational Teacher	17

GRAPH IIII

Scope of Curriculum

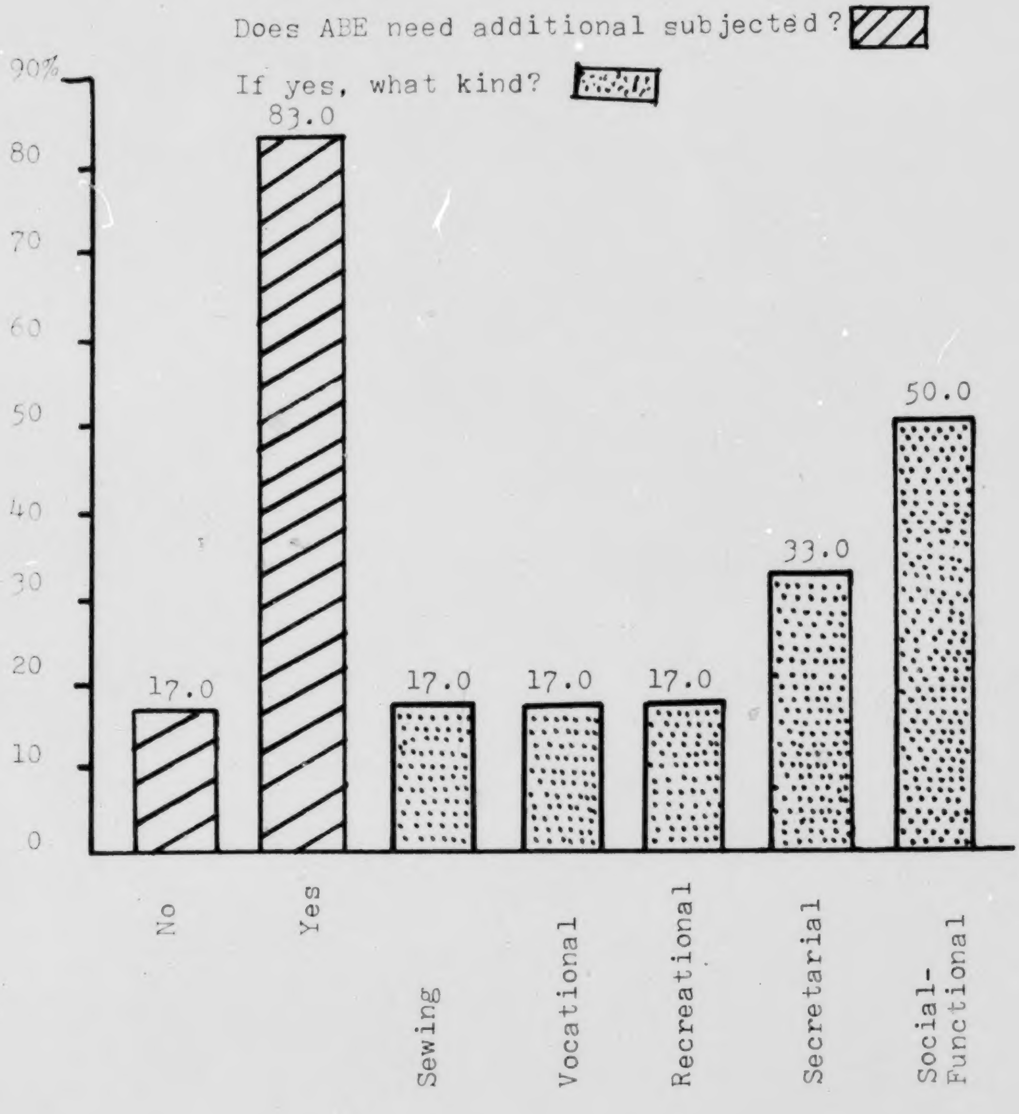


Chart IIII

Scope of Curriculum

Does ABE need additional subjects?

	%
Yes	83
No	17

If yes, what kind?

	%
Social-Functional	50
Secretarial	33
Sewing	17
Vocational	17
Recreational	17

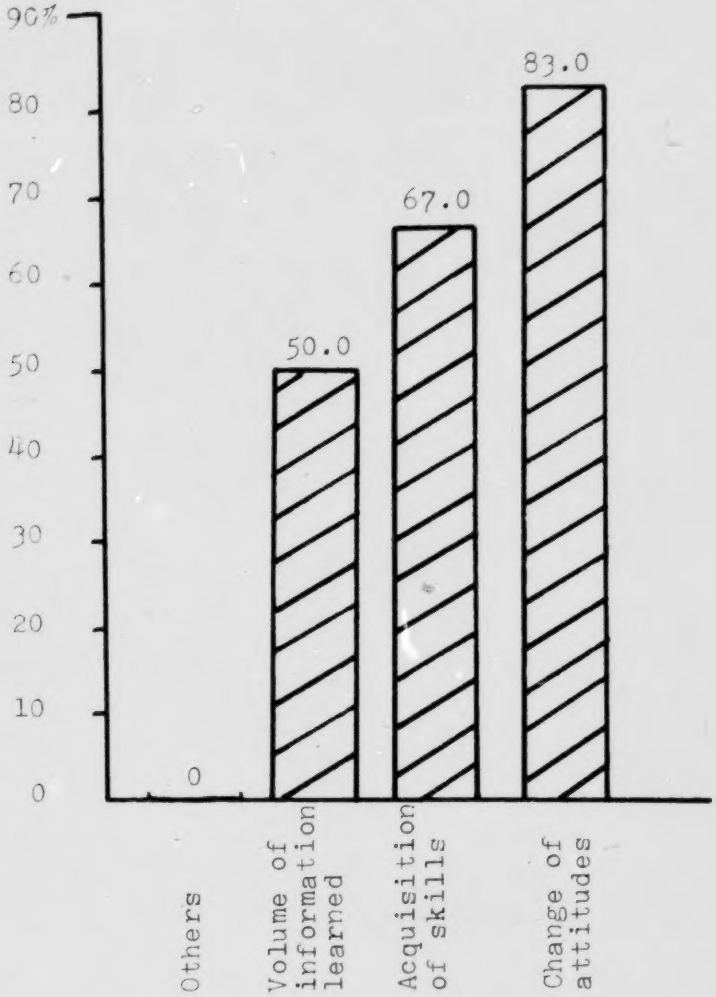
Scope of Curriculum. The first of the non-demographic questions put before the administrators was "does ABE need additional subjects?" If yes, what kind?" Eighty-three percent (83%) of the sample answered that ABE needs additional subjects. Fifty percent (50%) responded that they needed social-functioning subjects. Thirty-three percent (33%) stated they needed secretarial courses, and seventeen percent (17%) wanted to include sewing, vocational, and recreational courses in their curriculum.

Compared to last year's finding, the administrators have not changed in their opinions about the subjects that they feel should be included in their curriculum.

Evaluation Criteria. The administrators were asked the question "what criterion should be used for student evaluation?" The criteria selected were: (1) by volume of information learned in a specific time, (2) acquisition of usable skills, and (3) change of attitudes toward social or economic conditions (greater ability to think independently). Fifty percent (50%) stated that factual information, rules, and principles learned should be used for student evluation (#1 above). Sixty-seven percent (67%) responded that students should be evaluated on their acquisition of usable skills. The greatest percentage (83%) thought that students should be evaluated on their ability to think independently (#3 above).

The shape of the responses is the reverse of Por Fin II's findings. At that time, the most weight was given to #1, and the least to #3. From the standpoint of the structure underlying Por Fin, this appears to be a favorable change. Suggesting greater possibilities for implementation of the proposed curriculum.

GRAPH V
What criteria should be used for student evaluation?



What criteria should be used for student evaluation?

	%
Volume of information learned in a specified time. (ie. factual information principles, rules, etc.)	50
Acquisition of usable skills	67
Change of attitudes toward social or economic conditions; greater ability to think independently	83
Others	0

GRAPH VI

Are the student's needs being met? ▨

If no, why not? ░

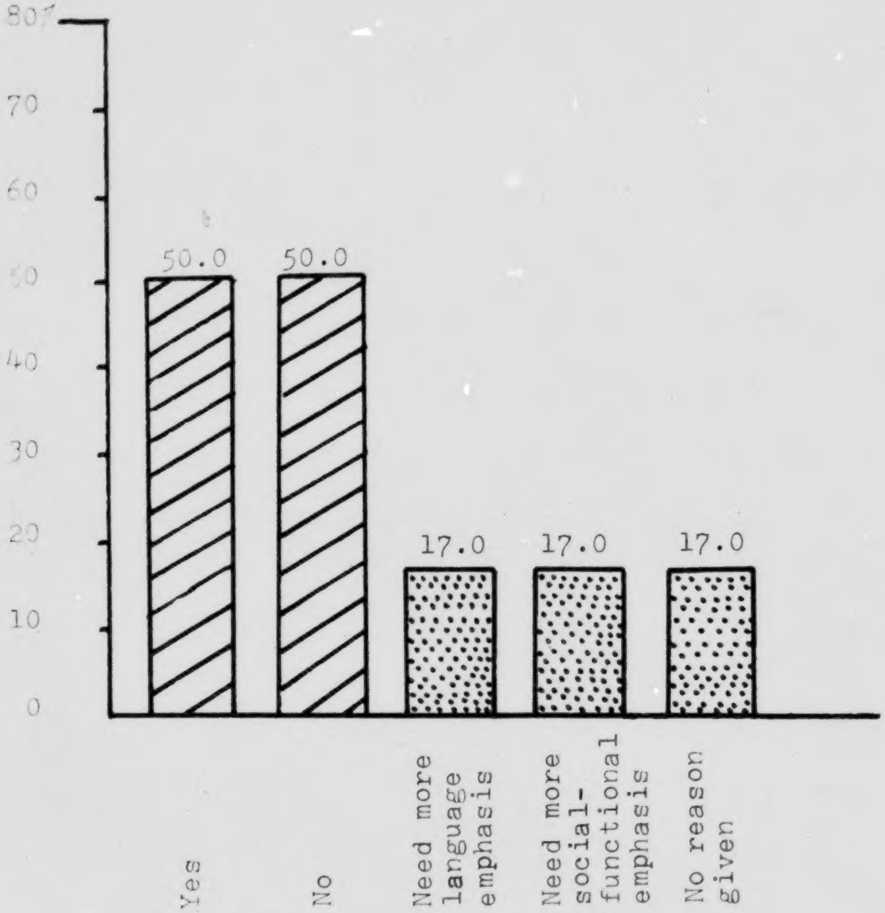


Chart VI

Are student's needs being met?	%
Yes	50
No	50

If no, why not?

	%
Need more language emphasis	17
Need more social-functional emphasis	17
No reason given	17

Student Needs. The final histogram of this instrument pertained to the question of whether or not the students' needs were being met. Fifty percent (50%) stated that they were, while the other fifty percent (50%) responded that they were not. Once again, there appears to be support for a thesis of lack of congruity among administrators, teachers, and students as to the goals and needs of the students and the subsequent focal point of a valid curriculum.

In the different categories, the administrators' and teachers' responses did not coincide concerning why the students' needs were or were not being met. Seventeen percent (17%) of the administrators felt that the students needed more emphasis on language; another seventeen percent (17%) felt that they needed more social-functional emphasis, and another seventeen percent (17%) gave no reason.

In Por Fin II research, sixty-two point five percent (62.5%) of the administrators felt that student needs were not being adequately met, a percentage not so substantially different from the current findings. In any case, the continued need for further communication in the area of needs assessment has been supported.

Summary. The administrators are generally degreed and have prior teaching experience, both in ABE and in other areas of education. In these areas, they compare equitably with those surveyed by Por Fin II.

Almost all the administrators made suggestions about additional subjects they felt were needed in ABE, although only half felt the students' needs were not being met. This would seem to imply that the suggestions made by some administrators were not considered to reflect needs of a critical nature.

The administrators generally reflected the viewpoint that students be evaluated on increases in abilities to think independently. This conicides with some of their other suggestions, such as inclusion of social-functioning subject matter. This circumstance would appear to bode favorably for adoption of the Por Fin materials. Although it is not altogether congruent with the findings in the area of assessment of student needs.

INTERPRETATION AND IMPLICATIONS OF RESULTS

Interpretations and Implications of Analysis by Instruments

The data revealed several significant factors. First of all, retention was higher for the experimental group students. This finding is important inasmuch as the original rationale for curriculum research was the wish to reduce substantially the high attrition rate extant in adult education nationwide. Secondly, testing recorded greater achievement by students in the experimental group. They generally scored higher on the language and mathematics test on increases in positive self-concept ratings, on language expansion, and on increases in social-functioning abilities. Finally, the questionnaires recorded significantly positive reactions on the part of the experimental groups students. They stayed in class, they wanted more class time, they voluntarily studied more, and they expanded their goals base to include general self-improvement and more education. These findings were in contrast to those for the control group students, who still had language-oriented goals and expressed dissatisfaction with their materials. This dissatisfaction could be related to the lack of congruence in responses from teachers and administrators with those of the students. Obviously there is no concensus between the group as to goals, causing subsequent choices of often inappropriate methods and materials.

Summary

With an experiment such as this one, it is difficult to establish time comparability. Further, the span was short and obviously created some difficulties. Nevertheless, the really important goal in this endeavor was to create and test an important product within the framework of a totally real teaching situation, and this criterion was met. There is a product, usable lessons at four different levels which has been validated as effective with the students who used it.

Within this given framework, use of this product led to the fulfillment of three important goals in adult education. First, student goals were being served. Secondly, student achievement levels were high. Thirdly, because the first two goals were met, student motivation was increased and broadened.

Although this curriculum is neither perfect nor all-comprehensive, the fact that it, in this situation, led to the fulfillment of these three goals is more than enough reason for it to be recommended to the profession at large for implementation. The staff of the Por Fin project does so recommend in the hope that replication of these achievements will result from such utilization and that greater life-functioning abilities, and greater personal satisfaction will accrue to all the students concerned.

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BIBLIOGRAPHY

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APPENDICES

APPENDIX A:

DATA ANALYSIS

Chi-Square Analysis of Drop-Out for Experimental versus Control Group

CONTROL AND EXPERIMENTAL GROUP
CUMULATIVE SCORES
DROP-OUT RATE

	Persisted	Dropped	Total
Experimental	42(31.9)	40(50.1)	82
Control	40(50.1)	89(78.9)	129
Totals	82	129	211

f_o	f_e	$f_o - f_e$	$(f_o - f_e)^2$	$\frac{(f_o - f_e)^2}{f_o}$
42	31.9	10.1	102.0	3.20
40	50.1	-10.1	102.0	2.04
40	50.1	-10.1	102.0	2.04
89	78.9	10.1	102.0	1.29

$$\sum \frac{(f_o - f_e)^2}{f_e} = X^2 = 8.57 \qquad df = 1 \qquad P < .01$$

CONTROL AND EXPERIMENTAL GROUPS LEVEL 1
DROP-OUT RATE

	Persisted	Dropped	Total
Experimental	25(15.3)	14(23.7)	39
Control	6(15.7)	34(24.3)	40
Totals	31	48	79

f_o	f_e	$f_o - f_e$	$(f_o - f_e)^2$	$\frac{(f_o - f_e)^2}{f_o}$
25	15.3	9.7	94.1	6.15
6	15.7	-9.7	94.1	5.99
14	23.7	-9.7	94.1	3.97
34	24.3	9.7	94.1	3.87

$$\sum \frac{(f_o - f_e)^2}{f_e} = X^2 = 19.98 \qquad df = 1 \qquad P < .001$$

CONTROL AND EXPERIMENTAL GROUPS LEVEL 2
DROP-OUT RATE

	Persisted	Dropped	Total
Experimental	7(7.88)	14(13.13)	21
Control	14(13.13)	21(21.88)	35
Totals	21	35	56

f_o	f_e	$f_o - f_e$	$(f_o - f_e)^2$	$\frac{(f_o - f_e)^2}{f_o}$
7	7.88	-.88	.77	.098
14	13.13	.87	.76	.058
14	13.13	.87	.76	.058
21	21.88	-.88	.77	.035

$$\sum \frac{(f_o - f_e)^2}{f_e} = X^2 = .249 \qquad df = 1$$

CONTROL AND EXPERIMENTAL GROUPS LEVEL 3
DROP-OUT RATE

	Persisted	Dropped	Total
Experimental	10(8.68)	12(13.32)	22
Control	20(21.32)	34(32.68)	54
Totals	30	46	76

f_o	f_e	$f_o - f_e$	$(f_o - f_e)^2$	$\frac{(f_o - f_e)^2}{f_o}$
10	8.68	1.32	1.74	.200
20	21.32	-1.32	1.74	.082
12	13.32	-1.32	1.74	.131
34	32.68	1.32	1.74	.053

$$\Sigma \frac{(f_o - f_e)^2}{f_e} = X^2 = .466 \qquad \text{df}= 1$$

Passive Language and Math Test

Analysis of Variance

Experimental and Control Group

All Levels

[illegible] scores

DATA FOR ANALYSIS OF VARIANCE OF POST TEST

Level 1 Exp. Group (0-3) X_1	X_1^2	Por Fin Level II Exp. Group (4-8) X_2	X_2^2	Por Fin Level III Exp. Group (9-12) X_3	X_3^2	Cont Group Level I (0-3) X_4	X_4^2	Cont. Group Level II (4-8) X_5	X_5^2	Cont. Group Level III (9-12) X_6	X_6^2
59	3481	123	15129	147	21609	70	4900	79	6241	114	12996
65	4225	98	9604	148	21904	84	7056	105	11025	140	19600
58	3364	98	9604	138	19044	84	7056	106	11236	110	12100
59	3481	123	15129	125	15625	42	1764	109	11881	107	11449
56	3136	119	14161	136	18496	116	13456	113	12769	137	18769
56	3136	91	8281	144	20736	89	7921	113	12769	107	11449
57	3249	142	20164	152	23104			87	7569	125	15625
58	3364			141	19881			107	11449	114	12996
45	2025			141	19881			100	10000	126	15876
71	5041			142	20164			107	11449	121	14641
79	4761							113	12769	139	19321
54	2916							92	8464	143	20449
56	3136							89	7921	144	20736
54	2916							106	11236	114	12996
55	3025									135	18225
83	6889									94	8836
62	3844									115	13225
97	9409									100	10000
96	9216									88	7744
104	10816									114	12996
125	15625										
94	8836										
116	13456										
121	14641										
114	12996										
[illegible]	$\Sigma X_1^2 = 156,$[illegible]	$\Sigma X_2 = 794$	$\Sigma X_2^2 = 92,072$	$\Sigma X_3 = 1414$	$\Sigma X_3^2 = 200,444$	$\Sigma X_4 = 435$	$\Sigma X_4^2 = 35,049$	$\Sigma X_5 = 1426$	$\Sigma X_5^2 = 146,778$	$\Sigma X_6 = 2337$	$\Sigma X_6^2 = 290,029$

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Computational Formulas
For
Analysis of Variance

$$\Sigma X_{tot} = \Sigma X_1 + \Sigma X_2 \ldots + \Sigma X_k$$

$$\Sigma X^2 + \Sigma X_1^2 + \Sigma X_2^2 + \ldots + \Sigma X_k^2$$

$$N_{tot} = N_1 + N_2 + \ldots + N_k$$

Computational Formulas In Finding SS's

$$SS_{tot} = (\Sigma X^2)_{tot} - \frac{(\Sigma X)^2_{tot}}{N_{tot}}$$

$$SS_{bg} = \left[\frac{(\Sigma X_1)^2}{N_1} + \frac{(\Sigma X_2)^2}{N_2} + \ldots + \frac{(\Sigma X_k)^2}{N_k} \right] - \frac{(\Sigma X)^2_{tot}}{N_{tot}}$$

$$SSwg = SS_{tot} - SSbg$$

Computational Formulas In Finding MS's

$MS_{bg} = \frac{SS_{bg}}{df_{bg}}$, where $df_{bg} = k-1$

$MS_{wg} = \frac{SSwg}{df_{wg}}$, where $N_{tot} - k$

F-Ratio

$$F = \frac{MS_{bg}}{MS_{wg}}$$

Computations and Results for Analysis of Variance for Post Test

$\Sigma X_{\text{tot}} = 8390$

$\Sigma X^2_{\text{tot}} = 921{,}4\ 4$

$N_{\text{tot}} = 82$

Computations of SS's

$SS_{\text{tot}} = 62{,}964$

$SS_{bg} = 42{,}881$

$SS_{wg} = 20{,}083$

Computations of MS's

$MS_{bg} = 8576.2$

$MS_{wg} = 264.6$

$F = 32.36$

Sources of Variation	SS	df	MS	F	P
Between Groups	42,881	5	8576.2	32.36	.01
Within Groups	20,083	76	264.6		
Totals	62,964	81			

Passive Language and Math Test

T-Ratio Analysis

Control Group

Pre- Versus Post-Test

Non-Cummulative Scores

Levels I, II, III

DATA

T-Ratio Analysis for Control Group

Pre- and Post-Test Control Group

Level I

(Non-Cumulative Score)

Pre Test X_1	X_1^2	Post Test X_2	X_2^2
46	2116	44	1936
46	2116	44	1936
45	2025	46	2116
43	1849	37	1369
46	2116	45	2025
46	2116	46	2116
$X_1=272$	$X_2^2=12338$	$X_2=262$	$X_2^2=11498$

Results of T-Ratio Analysis

Pre- and Post-Test Control Group

Level I

(Non-Cumulative Score)

Arithmetic Mean

$X_1 = 45.3$

$X_2 = 43.7$

$N = 6$

Standard Deviations

$= 2$

$= 2.6$

Estimate Standard Error of the Mean

$S_{X_1} = .909$

$S_{X_2} = 1.18$

Standard Error of the Difference Between Means

$S_{X_1 - X_2} = 1.49$

T-Ratio

$T = 1.09$

N.S. @ .05 level

T-Ratio Analysis for Control Group
Pre- and Post Test Control Group

Level II

(Non-Cumulative Score)

Pre (N=13)	Square	Post (N=13)	Square
10	100	14	196
13	169	13	169
9	81	14	196
16	256	16	256
13	169	16	256
13	169	14	196
14	196	13	169
13	169	14	196
16	256	15	225
11	121	13	169
9	81	16	256
7	49	9	81
7	40	16	256
$EX_1=151$	$EX_1^2=1865$	$EX_2=183$	$EX_2^2=2621$

Results of T-Ratio Analysis

Pre- and Post-Test Control Group

Level II

(Non-Cumulative Score)

Arithmetic Mean

$\bar{X}_1 = 11.6$

$\bar{X}_2 = 14.1$

$N = 13$

Standard Deviation

$= 2.94$

$= 1.66$

Estimate of Standard Error of the Mean

$S_{\bar{X}_1} = .84$

$S_{\bar{X}_2} = .47$

Standard Error of the Difference Between Means

$S_{\bar{X}_1 - \bar{X}_2} = .96$

T-Ratio

$T = 2.60$

$T < .01$

T-Ratio Analysis for Control Group

Pre- and Post-Test Control Group

Level III

(Non-Cumulative Score)

Pre	Square	Post	Square
28	784	32	1024
39	1521	36	1296
37	1369	35	1225
24	576	30	900
39	1511	37	1369
26	676	26	676
32	1024	37	1369
42	1764	41	1681
20	400	36	1296
33	1089	35	1225
37	1369	40	1600
$EX_1=357$	$EX_1^2=12093$	$EX_2=385$	$EX_2^2=13661$

Results of T-Ratio Analysis

Pre- and Post-Test Control Group

Level III

Arithmetic Mean

$\bar{X}_1 = \frac{EX_1}{N} = \frac{357}{11} = 32.5$

$\bar{X}_2 = 35.0$

$N = 11$

Standard Deviation

$= 6.50$

$= 4.06$

Estimate of Standard Error of Mean

$S_{\bar{X}_1} = \frac{6.50}{3.2}$

$S_{\bar{X}_2} + 1.27$

Standard Error of the Difference Between Means

$S_{\bar{X}_1 - \bar{X}_2} = 2.39$

T-Ratio

$T = 1.05$

N.S. @ .05 level

Passive Language and Math Test
T-Ratio Analysis
Pre- Versus Post-Test
Non-Cumulative Scores
Levels I, II, & III

Data
T-Ratio Analysis for Experimental Group
Pre- and Post-Test Level 1
(Non-Cumulative Score)

Pre Test X_1	X_1^2	Post Test X_2	X_2^2
38	1444	46	2116
45	2025	46	2116
40	1600	46	2116
46	2116	46	2116
27	729	45	2025
40	1600	43	1849
44	1936	44	1936
42	1764	45	2025
27	729	45	2025
38	1444	46	2116
36	1296	45	2025
41	1681	45	2025
35	1225	44	1936
36	1296	45	2025
38	1444	45	2025
32	1024	42	1746
41	1681	45	2025
46	2116	46	2116
42	1764	46	2116
46	2116	44	1936
46	2116	45	2025
46	2116	46	2116
46	2116	46	2116
46	2116	45	2025
$\Sigma X_1=964$	$\Sigma X_1^2=39494$	$\Sigma X_2=1081$	$\Sigma X_2^2=48715$

Results of T-Ratio Analysis

Pre- and Post-Test

Level I

(Non-Cumulative Score)

Arithmetic Mean

$\bar{X}_1 = 40.2$ $N_1 = 24$

$\bar{X}_2 = 75$ $N_2 = 24$

Standard Deviations

$\tilde{\sigma}_1 = 5.4$

$\tilde{\sigma}_1 = 2.2$

Estimate Standard Error of the Means

$S_{\bar{x}_1} = 1.12$

$S_{\bar{x}_2} = .46$

Standard Error of the Difference Between Means

$S_{\bar{x}_1 - \bar{x}_2} = 1.21$

T-Ratio

$T = 4.13$ $T > .01$

Data for T-Ratio Analysis

Experimental Group

Level II

(Non-Cumulative Scores)

Pre Scores	Squares	Post Scores	Squares
X_1	X_1^2	X_2	X_2^2
11	121	16	256
16	256	16	256
16	256	16	256
16	256	16	256
16	256	15	225
--	--	16	256
5	25	10	100
$\sum X_1=80$	$\sum X_1^2=1170$	$\sum X_2=105$	$\sum X_2^2=1605$

Results of T-Ratio Analysis

Experimental Group Level 2

Arithmetic Mean

$\bar{X}_1 = 11.4$ $\quad N = 7$

$\bar{X}_2 = 15$

Standard Deviations

$\tilde{\sigma}_1 = 6.03$

$\tilde{\sigma}_2 = 2.05$

Estimate Standard Error of the Mean

$S_{\bar{x}_1} = 1.01$

$S_{\bar{x}_2} = .34$

Standard Error of the Difference Between Means

$S_{\bar{x}_1 - \bar{x}_2} = 2.85$

T-Ratio

$t = 1.26$

Data for T-Ratio Analysis

Experimental Group

Level III

(Non-Cumulative Scores)

X_1	X_1^2	X_2	X_2^2
37	1369	42	1764
42	1764	43	1849
33	1089	40	1600
26	676	34	1156
36	1296	36	1296
37	1369	38	1444
39	1521	41	1681
41	1681	42	1764
36	1296	40	1600
35	1225	38	1444
$\Sigma X_1=362$	$\Sigma X_1^2=13286$	$\Sigma X_2=394$	$\Sigma X_2^2=15598$

Results of T-Ratio Analysis

Experimental Group

Level III

Arithmetic Mean

$\bar{X}_1 = 36.2$ $N = 10$

$\bar{X}_2 = 39.4$

Standard Deviations

$\tilde{\sigma}_1 = 4.26$

$\tilde{\sigma}_2 = 2.68$

Estimate Standard Error of the Mean

$S_{\bar{x}_1} = .47$

$S_{\bar{x}_2} = .298$

Standard Error of the Difference Between Means

$S_{\bar{x}_1 - \bar{x}_2} = 1.68$

T-Ratio

$T = 1.90$

Passive Language and Math Test
T-Ratio Analysis
Experimental Versus Control Group
Cumulative Scores
Levels I, II, & III

Data T-Ratio Analysis
Experimental Group Versus Control Group
Level I

Experimental Group		Control Group	
X_1	X_1^2	X_4	X_4^2
59	3481	70	4900
65	4225	84	7056
58	3364	84	7056
59	3481	42	1764
56	3136	116	13456
56	3136	89	7921
57	3249	$\Sigma X_4=485$	$\Sigma X_4^2=35,097$
58	3364		
45	2025		
71	5041		
69	4761		
54	2916		
56	3136		
54	2916		
55	3025		
83	6889		
62	3844		
97	9409		
96	9216		
104	10816		
125	15625		
94	8836		
116	13456		
121	14641		
114	12996		
$\Sigma X_1=1884$	$\Sigma X_1^2=156,984$		

Results of T-Ratio Analysis

Experimental Group Versus Control Group

Level I

Arithmetic Mean

$\bar{X}_1 = 75$ $N_1 = 25$

$\bar{X}_4 = 81$ $N_4 = 6$

Standard Deviations

$\sigma_1 = 22.4$

$\sigma_4 = 25$

Estimate Standard Error of the Mean

$S_{\bar{x}_1} = 4.6$

$S_{\bar{x}_4} = 11$

Standard Error of the Difference Between Means

$S_{\bar{x}_1 - \bar{x}_4} = 11.9$

T-Ratio

$T = .555$ N.S. at .05 level, df = 29

Data T-Ratio Analysis

Experimental Group Versus Control Group

Level II

Experimental Group		Control Group	
X_2	X_2^2	X_5	X_5^2
123	15129	79	6,241
98	9604	105	11,025
98	9604	106	11,236
123	15129	109	11,881
119	14161	113	12,769
91	8281	113	12,769
142	20164	87	7,569
$\Sigma X_2=794$	$\Sigma X_2^2=92,072$	107	11,449
		100	10,000
		107	11,449
		113	12,769
		92	8,464
		89	7.921
		106	11,236
		$\Sigma X_5=1,426$	$\Sigma X_5^2=146,778$

Results of t-Ratio Analysis

Experimental Group vs. Control Group

Level 2

Arithmetic Mean

$\bar{X}_2 = 113.4$ $N_2 = 7$

$\bar{X}_5 = 101$ $N_5 = 14$

Standard Deviations

$\sigma_2 = 17.1$

$\sigma_5 = 16.8$

Estimate Standard Error of the Mean

$S_{\bar{X}2} = 7.1$

$S_{\bar{x}_5} = 4.7$

Standard Error of the Difference Between Means

$S_{\bar{x}_2 - \bar{x}_5} = 5.7$

t-Ratio

$t = 2.175$ $p > .05$; $df = 19$

Data for Level 3

t-ratio analysis
(EXP. Group vs Control Group)

EXP. Group X_1	X_1^2	Control Group X_2	X_2^2
147	21609	114	12996
148	21904	140	19600
138	19044	110	12100
125	15625	107	11449
136	18496	137	18769
144	20732	107	11449
152	23104	125	15625
141	19881	114	12996
141	19881	126	15876
142	20164	121	14641
		139	19321
		143	20449
		144	20736
		114	12996
		135	18225
		94	8856
		115	13225
		100	10000
		88	9744
		114	12996
$\sum X_1=1414$	$\sum X_1^2=200444$	$\sum X_2=2387$	$\sum X_2^2=290029$

Computational Formulas For
t- ratio Analysis

Arithmetic Mean

$$\overline{X}_1 = \frac{\Sigma X_1}{N}$$

$$\overline{X}_2 = \frac{\Sigma X_2}{N}$$

Raw-Score Calculations of SD.

$$\sigma = \sqrt{\frac{\Sigma X^2}{N} - \overline{X}^2}$$

Estimate-Standard Error of the Mean

$$S_{\overline{x}} = \frac{\tilde{\sigma}}{n-1}$$

Standard Error of the Difference Between Means

$$S_{\overline{x}_1 - \overline{x}_2} \sqrt{S_{\overline{x}_1}^2 + S_{\overline{x}_2}^2}$$ small sample with equal N's

$$Sx_1 - x_2 \sqrt{\frac{N_1 \tilde{\sigma}_1^2 + N_2 \tilde{\sigma}_2^2}{N_1 + N_2 - 2} (1/n_1 + 1/n_2)}$$ small sample with equal or unequal N's

t-Ratio.

$$t = \frac{\overline{X}_1 - \overline{X}_2}{S\overline{x}_1 - \overline{x}_2}$$

Results for
t-ratio Analysis
Exp. Group vs.Control Group (Level 3)

Arithmetic Mean

$\bar{x}_1 = 141.4$ $N_1 = 10$

$\bar{x}_2 = 119.3$ $N_2 = 20$

Standard Deviations

$\sigma_1 = 7.1$

$\sigma_2 = 3.7$

Estimate-Standard Errow of the Mean

$S\bar{x}_1 = 2.4$

$S\bar{x}_2 = 3.7$

Standard Errow of the Difference Between Means

$S\bar{x}_1 - \bar{x}_2 = 5.7$

t- Ratio

$t = 3.87$

$p > .ol$ $df = 28$

Inferred Self-Concept Scale
Wilcoxon Signed-Ranks Test
Control Group
Pre- Versus Post-Rating
Levels I, II, & III

DATA FROM INFERRED SELF-CONCEPT SCALE

Wilcoxon Signed-Ranks Test

Control Group (Level 1)

Subject	Pre Score	Post Score	d	$\text{Rank}_{(d)}$	Signed Rank
1	3.05	2.44	.61	3	3
2	2.36	2.19	.17	1	1
3	2.83	1.82	1.01	5	5
4	1.92	2.58	-.66	4	-4
5	3.64	2.13	.51	2	2
6	3.38	1.13	2.25	6	6
					$\Sigma_{+}=17$
					$\Sigma_{-}=-4$

$N_{S-R}=6$

$T = 4$

T N.S. @ .05 level

DATA FROM INFERRED SELF-CONCEPT SCALE

Wilcoxon Signed-Ranks Test

Control Group (Level 2)

Subject	Pre Score	Post Score	d	Rank$_{(d)}$	Signed Rank
1	2.82	2.45	.37	9	9
2	2.25	2.36	-.11	4	-4
3	2.38	2.44	-.06	2.5	-2.5
4	2.38	2.07	.31	7.5	7.5
5	2.25	2.44	-.19	6	-6
6	2.35	2.32	.03	1	1
7	2.13	2.19	-.06	2.5	-2.5
8	2.13	2.44	-.31	7.5	-7.5
9	2.03	2.19	-.16	5	-5
10	2.86	2.38	.48	10	10
11	1.77	1.77	-	-	-
12	2.02	1.03	.99	12	12
13	2.71	1.13	1.58	13	13
14	1.94	1.17	.77	11	11

$\Sigma + = 63.5$

$\Sigma - = -27.5$

$N_{S-R} = 13$

$T = 27.5$

T N.S. @ .05 level

DATA FROM INFERRED SELF-CONCEPT SCALE

Wilcoxon Signed-Ranks Test

Control Group (Level 3)

Subject	Pre Score	Post Score	d	$\text{Rank}_{(d)}$	Signed Rank
1	2.38	2.19	.19	3	3
2	3.83	1.60	2.23	18	18
3	3.14	2.44	.70	11.5	11.5
4	1.83	2.19	-.36	4	-4
5	1.73	2.19	-.46	6	-6
6	2.71	2.32	.39	5	5
7	1.37	1.85	-.48	7	-7
8	1.10	1.10	-	-	-
9	1.66	1.66	-	-	-
10	1.00	1.75	-.75	13	-13
11	3.30	4.00	-.70	11.5	-11.5
12	2.18	2.11	.07	1	1
13	2.49	1.10	1.39	16	16
14	2.49	3.11	-.62	10	-10
15	2.04	2.14	-.10	2	-2
16	2.58	1.10	1.48	17	17
17	2.28	1.10	1.18	14	14
18	1.96	1.47	.49	8	8
19	2.84	2.34	.50	9	9
20	2.41	1.10	1.31	15	15

$\Sigma + = 117.5$

$\Sigma - = 53.5$

$N_{S-R} = 18$ $T = 53.5$

T N.S. @ .05 level

Inferred Self-Concept Scale

Mann-Whitney U Test

Experimental Versus Control Group

Post Rating

DATA FROM INFERRED SELF-Concept Scale
Mann-Whitney U-Test
(Experimental Group Versus Control Group)
Level I

Experimental Group		Control Group	
N=25		N=6	
X	Rank	X	Rank
2.84	1	2.58	3
2.61	2	2.44	4
2.32	5	2.19	6
2.18	7	2.13	8
2.11	9	1.82	15
2.08	10	1.13	25
1.98	11		R_2=61
1.92	12		
1.88	13.5		
1.88	13.5		
1.80	16.5		
1.80	16.5		
1.77	18.5		
1.77	18.5		
1.73	20.5		
1.73	20.5		
1.57	22		
1.53	23		
1.40	24		
1.03	26		
1.00	29		
1.00	29		
1.00	29		
1.00	29		
1.00	29		
	R=435		

RESULTS OF MANN-WHITNEY U-TEST

Experimental Group Versus Control Group

Level I

RESULTS

$R_1 = 435$

$R_2 = 61$

$N_1 N_2 = 150$

$U_1 = 40$

$U_2 = 110$

$U_e = 75$

$\sigma u = 19.95$

$z = 1.75$

H_o: There is no significant difference at the .05 level of probability between the attitudinal outlook of the experimental group versus control group.

DATA FROM INFERRED SELF-CONCEPT SCALE

Mann-Whitney U-Test

(Experimental Group Versus Control Group)

Level II

Experimental Group

$N_1 = 7$

X	Rank
2.24	8
2.04	12.5
2.04	12.5
1.77	14.5
1.37	16
1.33	17
1.30	18
	$R_1 = 98.5$

Control Group

$N_2 = 14$

X	Rank
2.45	1
2.44	3
2.44	3
2.44	3
2.38	5
2.36	6
2.32	7
2.19	9.5
2.19	9.5
2.07	11
1.77	14.5
1.18	19
1.17	20
1.03	21
	$R_2 = 132.5$

COMPUTATIONAL FORMULAS AND RESULTS

Mann-Whitney U-Test

(Experimental Group Versus Control Group)

Level II

Computational Fromulas

$$U_1 = N_1N_2 + \frac{N_1(N_1+1)}{2} - R_1$$

$$U_2 = N_1N_2 + \frac{N_2(N_2+1)}{2} - R_2$$

$$U_e = \frac{N_1N_2}{2}$$

$$\sigma_u = \sqrt{\frac{N_1N_2(N_1+N_2+1)}{12}}$$

$$z = \frac{U_1 - U_e}{\sigma_u} \text{ or } z = \frac{U_2 - U_e}{\sigma_u}$$

RESULTS

$R_1 = 98.5$

$R_2 = 132.5$

$N_1N_2 = 98$

$U_1 = 27.5$

$U_2 = 70.5$

$U_e = 49$

$\sigma_u = 13.29$

$z = 1.61$

H_o: There is no significant difference in the $\bar{X}$'s in post test self-concept scores between experimental group versus control group, at the .05 level.

RESULTS OF MANN-WHITNEY U-TEST
Experimental Group vs. Control Group
Level 3

RESULTS

$R_1 = 154.5$

$R_2 = 310.5$

$N_1N_2 = 200$

$U_1 = 100.5$

$U_2 = 99.5$

$U_e = 100$

$\sigma_u = 22.5$

$z = .022$

H_o: There is no significant difference at the .05 level of probability between the attitudinal outlook of the experimental group vs control group.

DATA FROM INFERRED SELF-CONCEPT SCALE
Mann-Whitney U-Test
(Experimental Group vs. Control Group)
Level 3

Experimental Group
$N_1= 10$

X	Rank
2.68	3.5
2.68	3.5
2.58	5
1.86	14
1.80	16
1.75	17.5
1.70	19
1.57	22
1.40	24
1.03	30

$R_1= 154.5$

Control Group
$N_2=20$

X	Rank
4.0	1
3.11	2
2.44	6
2.34	7
2.32	8
2.19	10
2.19	10
2.19	10
2.14	12
2.11	13
1.85	15
1.75	17.5
1.66	20
1.60	21
1.47	23
1.10	27
1.10	27
1.10	27
1.10	27
1.10	27

$R_2= 310.5$

Inferred Self-Concept Scale
Wilcoxon Signed-Ranks Test
Experimental Group at Time (T_1 & T_2)
Levels I, II, & III

DATA FOR INFERRED SELF-CONCEPT SCALE
Wilcoxon Signed-Ranks Test
Experimental Group (Level 1)

Subject	Pretest	Posttest	d	Rank(d)	Signed Rank
1	2.08	1.03	1.05	21	+21
2	1.82	1.80	.02	2.5	+2.5
3	2.32	1.77	.55	15	+15
4	2.42	1.53	.89	19	+19
5	2.11	1.73	.38	11	+11
6	1.88	1.00	.88	18	+18
7	1.73	1.57	.16	6	+6
8	3.63	1.73	1.90	23	+23
9	3.38	1.80	1.58	22	+22
10	1.67	1.92	-.25	7	- 7
11	2.01	2.84	-.83	17	-17
12	2.10	1.77	.33	9	+ 9
13	3.38	2.61	.77	16	+16
14	1.07	1.00	.07	4	+ 4
15	1.91	1.00	.91	20	+20
16	1.89	1.88	.01	1	+ 1
17	1.78	1.88	-.10	5	- 5
18	2.48	2.11	.37	10	+10
19	1.57	2.08	-.51	14	-14
20	3.64	1.00	2.64	24.5	+24.5
21	3.64	1.00	2.64	24.5	+24.5
22	1.85	2.32	-.47	13	-13
23	1.76	2.18	-.42	12	-12
24	2.00	1.98	.02	2.5	+2.5
25	1.69	1.40	.29	8	+ 8
					Σ += +257 Σ -= - 68
N_{S-R}= 25	T= 68 T>.01	161			

DATA FROM INFERRED SELF-CONCEPT SCALE
Wilcoxon Signed-Ranks Test
Experimental Group (Level 2)

Subject	Pretest	Posttest	d	Rank (d)	Signed Rank
1	3.16	1.07	2.09	7	+ 7
2	2.65	2.24	.41	2	+ 2
3	1.84	1.77	.07	1	+ 1
4	1.84	1.37	.47	3	+ 3
5	1.87	1.30	.57	4	+ 4
6	2.03	1.33	.70	5	+ 5
7	2.80	2.04	.76	6	+ 6
					$\Sigma_{+} = 28$ $\Sigma_{-} = 0$

$N_{S-R} = 7$

$T = 0$

$\therefore T > .01$

$H_o \therefore$ no difference in experimental group's attitude at $time_1 - time_2$.

DATA FROM INFERRED SELF-CONCEPT SCALE
Wilcoxon Signed-Ranks Test
Experimental Group (level 3)

Subject	Pretest	Posttest	d	Rank(d)	Signed Rank
1	1.75	1.75	0	--	--
2	1.88	1.40	+.48	2	+2
3	2.61	1.03	1.57	7	+7
4	2.75	1.70	1.05	6	+6
5	2.68	2.68	0	--	--
6	1.03	2.68	-1.65	8	-8
7	1.70	2.58	- .88	3.5	-3.5
8	2.68	1.80	.88	3.5	+3.5
9	2.58	1.57	1.01	5	+5
10	1.80	1.86	- .06	1	-1
					Σ_{+}= +23.5
					Σ_{-}= -12.5

N_{S-R}= 8

T= 12.5
T is N.S. at .05 level

H_0: There is no significant difference in the Mean scores-indicating attitudinal change- for experimental group level 3 at $time_1$-$time_2$.

Data from Inferred Self-Concept Scale for Wilcoxon Signed-Rank and Mann-Whitney U-Test

DATA FROM INFERRED SELF-CONCEPT SCALES
FOR EXPERIMENTAL GROUPS
LEVELS 1-3 (PRE AND POST SCORES)

Pre Scores Level 1	Post Scores Level 1
1. 2.08	1. 1.03
2. 1.82	2. 1.80
3. 2.32	3. 1.77
4. 2.42	4. 1.53
5. 2.11	5. 1.73
6. 1.88	6. 1.00
7. 1.73	7. 1.57
8. 3.63	8. 1.73
9. 3.38	9. 1.80
10. 1.67	10. 1.92
11. 2.01	11. 2.84
12. 2.10	12. 1.77
13. 3.38	13. 2.61
14. 1.07	14. 1.00
15. 1.91	15. 1.00
16. 1.89	16. 1.88
17. 1.78	17. 1.88
18. 2.48	18. 2.11
19. 1.57	19. 2.08
20. 3.64	20. 1.00
21. 3.64	21. 1.00
22. 1.85	22. 2.32
23. 1.76	23. 2.18
24. 2.00	24. 1.98
25. 1.69	25. 1.40

Pre Scores Level 2	Post Scores Level 2
1. 3.16	1. 1.07
2. 2.65	2. 2.24
3. 1.84	3. 1.77
4. 1.84	4. 1.37
5. 1.87	5. 1.30
6. 2.03	6. 1.33
7. 2.80	7. 2.04

Pre Scores Level 3		Post Scores Level 3	
1.	1.75	1.	1.75
2.	1.80	2.	1.40
3.	2.61	3.	1.03
4.	2.75	4.	1.70
5.	2.68	5.	2.68
6.	1.03	6.	2.68
7.	1.70	7.	2.58
8.	2.68	8.	1.80
9.	2.58	9.	1.57
10.	1.80	10.	1.86

DATA FROM INFERRED SELF-CONCEPT SCALES
FOR CONTROL GROUP LEVELS 1-3
(PRE AND POST SCORES)

Pre Scores Level 1	Post Scores Level 1
1. 3.05	1. 2.44
2. 2.36	2. 2.19
3. 2.83	3. 1.82
4. 1.92	4. 2.58
5. 3.64	5. 2.13
6. 3.38	6. 1.13

Pre Scores Level 2	Post Scores Level 2
1. 2.82	1. 2.45
2. 2.25	2. 2.36
3. 2.38	3. 2.44
4. 2.38	4. 2.07
5. 2.25	5. 2.44
6. 2.35	6. 2.32
7. 2.13	7. 2.19
8. 2.13	8. 2.44
9. 2.03	9. 2.19
10. 2.86	10. 2.38
11. 1.77	11. 1.77
12. 2.02	12. 1.03
13. 2.71	13. 1.13
14. 1.94	14. 1.17

	Pre Scores Level 3		Post Scores Level 3
1.	2.38	1.	2.19
2.	3.83	2.	1.60
3.	3.14	3.	2.44
4.	1.83	4.	2.19
5.	1.73	5.	2.19
6.	2.71	6.	2.32
7.	1.37	7.	1.85
8.	1.10	8.	1.10
9.	1.66	9.	1.66
10.	1.00	10.	1.75
11.	3.30	11.	4.00
12.	2.18	12.	2.11
13.	2.49	13.	1.10
14.	2.49	14.	3.11
15.	2.04	15.	2.14
16.	2.58	16.	1.10
17.	2.28	17.	1.10
18.	1.96	18.	1.47
19.	2.84	19.	2.34
20.	2.41	20.	1.10

APPENDIX B:

THE INSTRUMENTS

The Instruments:
Passive Language and Mathematics Test

GROUP 1, ORAL OR WRITTEN

Conteste por escrito las preguntas que signen:

Students must answer orally or written.

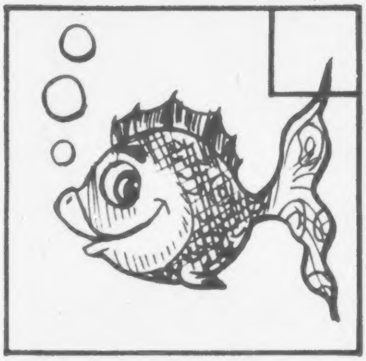
1. Good morning ____
2. How are you?____
3. What is your name?____________________________________
4. Where are you from?____________________________________
5. How old are you?______________________________________
6. Where were you born?___________________________________
7. When did you arrive here?_______________________________
8. What are you going to study?____________________________
9. Do you like it here?____________________________________
10. How is the weather outside?____________________________

GROUP II

Decida cual palabra nombra la ilustración y subráyela:

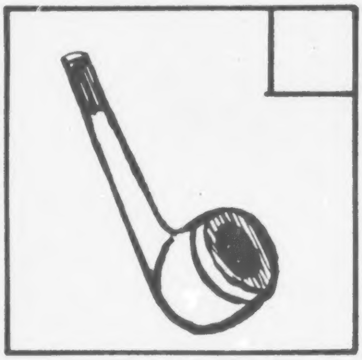
Decide which word is the name of the picture in the box and write the word

1



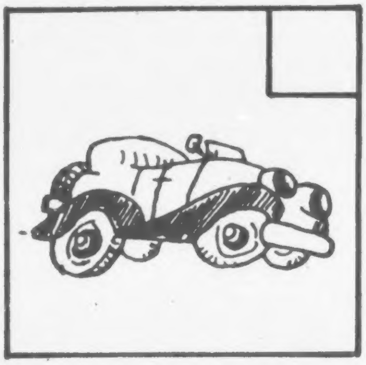
1. FISH 2. CAT 3. DOG

2



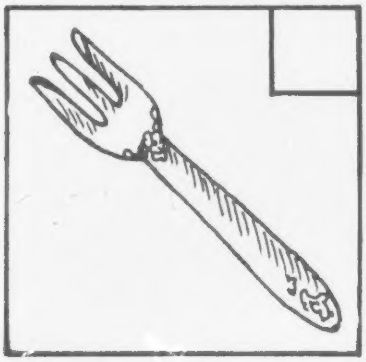
1. BALL 2. MOON 3. PIPE

3.



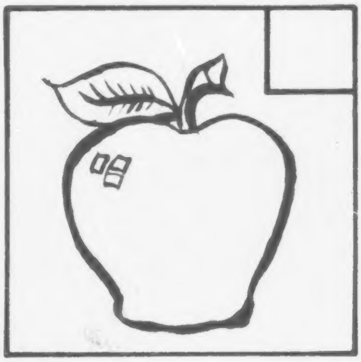
1. TRACTOR 2. CAR 3. TRUCK

4.



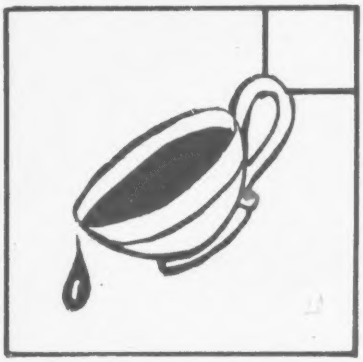
1. PAPER 2. TABLE FORK 3. KNIFE

5.



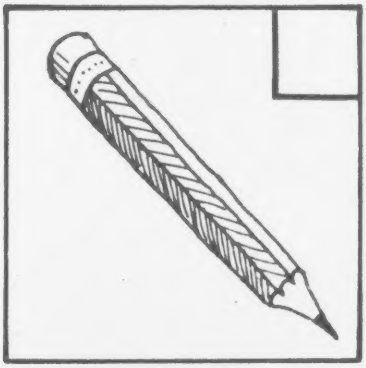
1. APPLE 2. SEED 3. WIRE

6.



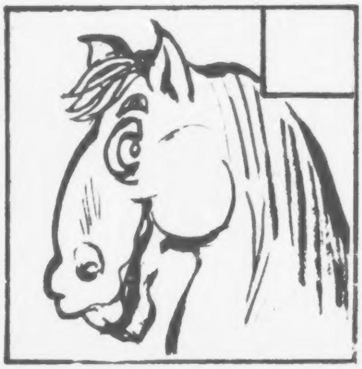
1. PENCIL 2. APPLE 3. CUP

7.



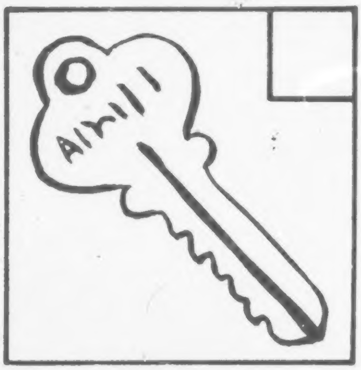
1. PENCIL 2. CHALK 3. RULER

8.



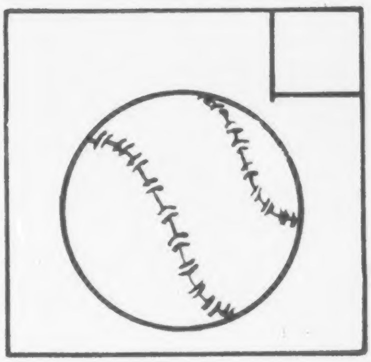
1. HORSE 2. CAT 3. LION

9.



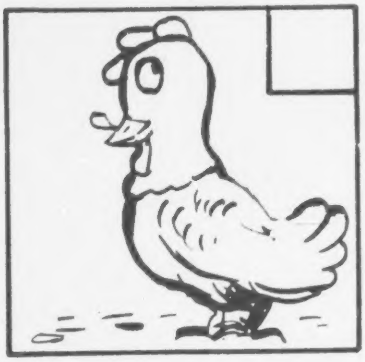
1. PEN 2. KEY 3. LOCK

10



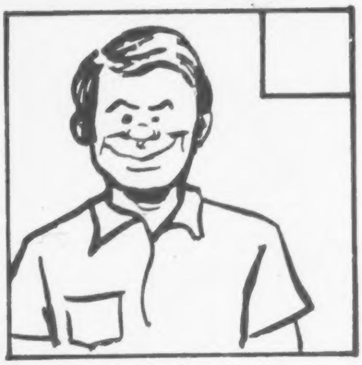
1. BAT 2. BASE 3. BALL

11.



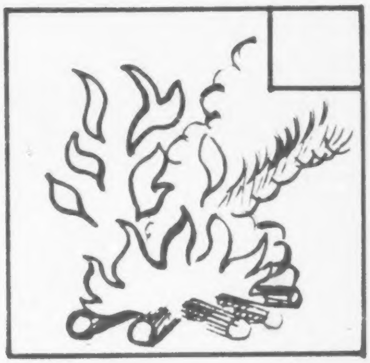
1. CHICKEN 2. EGG 3. CHAIR

12.



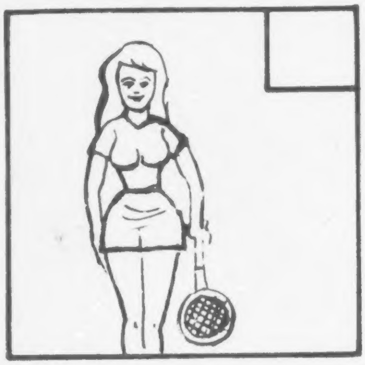
1. TREE 2. MAN 3. CAR

13.



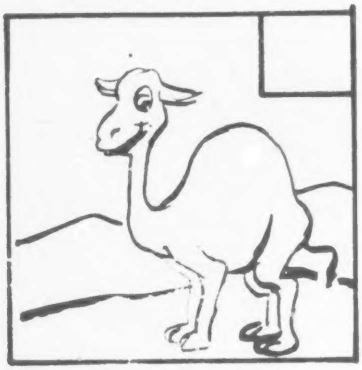
1. FIRE 2. WATER 3. SOIL

14.



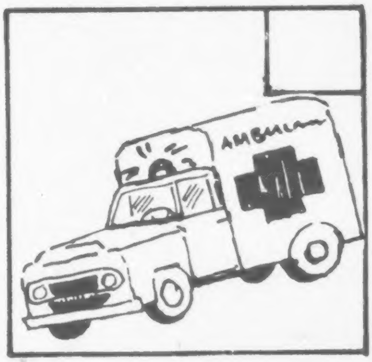
1. DESK 2. HOUSE 3. GIRL

15.



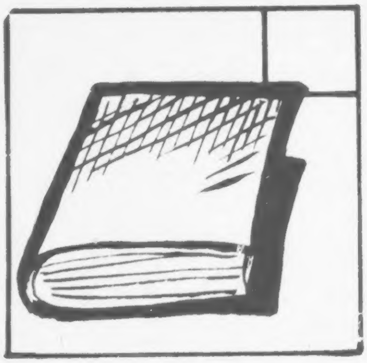
1. COW 2. CAMEL 3. HORSE

16.



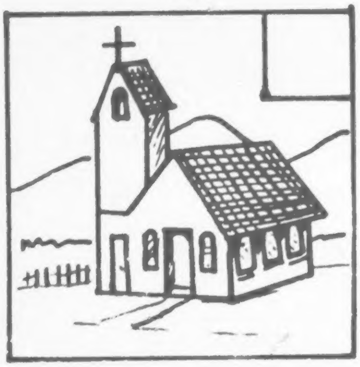
1. AMBULANCE 2. WAGON 3. TRUCK

17.



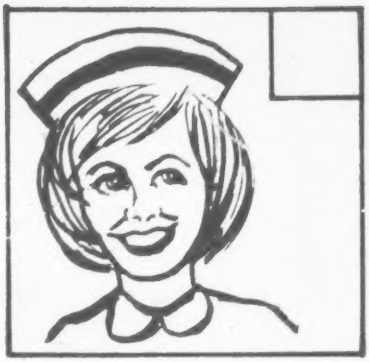
1. PEN 2. BOOK 3. CUP

18.



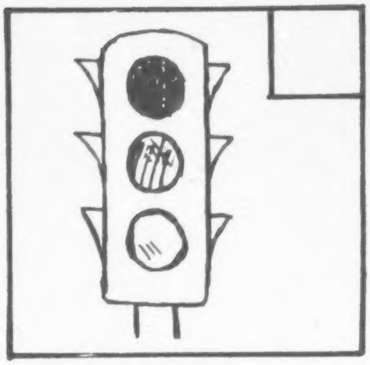
1. SCHOOL 2. CHURCH 3. GARAGE

19



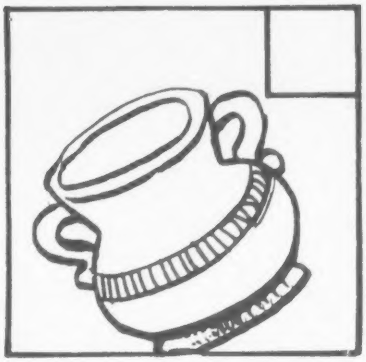
1. NURSE 2. DOCTOR 3. TEACHER

20.



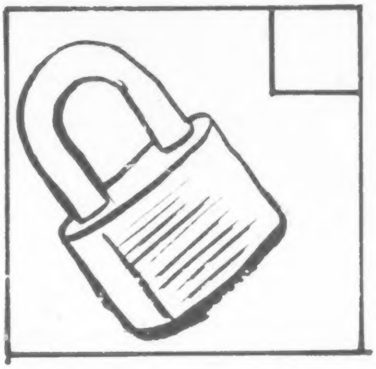
1. RAT 2. TRAFIC LIGHT 3. SNAKE

21.



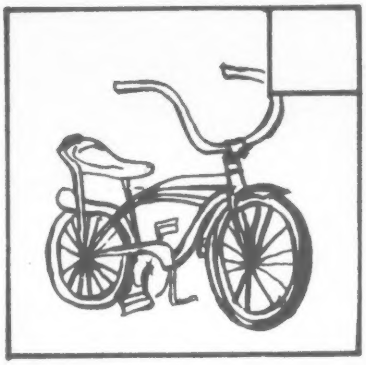
1. CAR 2. HOUSE 3. POT

22.



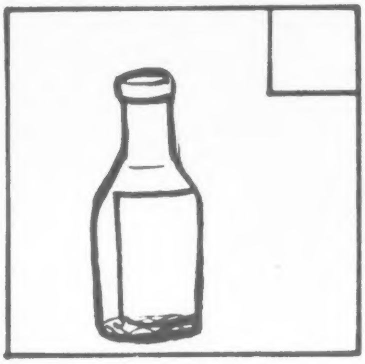
1. BOOK 2. LOCK 3. TABLE

23.



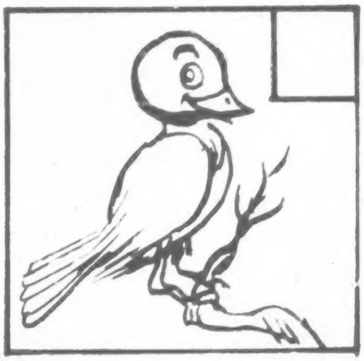
1. BICYCLE 2. TRUCK 3. TRAIN

24



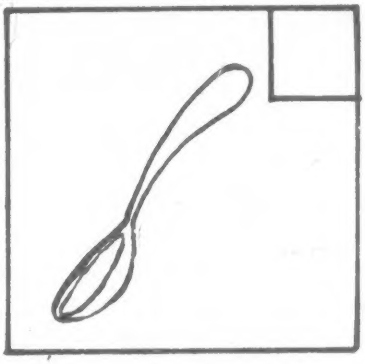
1. BOTTLE 2. JUG 3. PLATE

25.



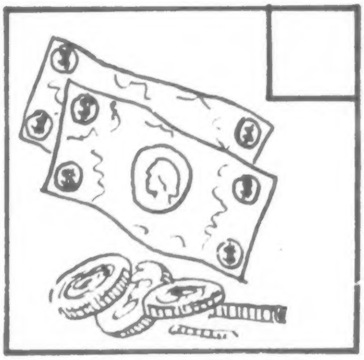
1. FLY 2. DOG 3. BIRD

26.



1. SPOON 2. FORK 3. KNIFE

27.

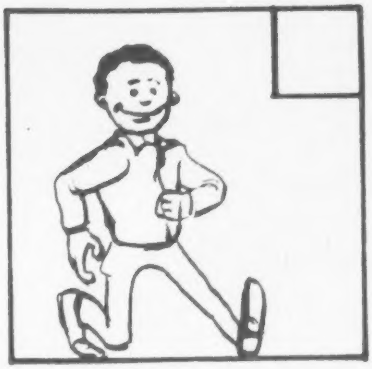


1. PAPER 2. MONEY 3 CANDY

Decida cual oración exprresa la acción en el cuadro y subráyela.

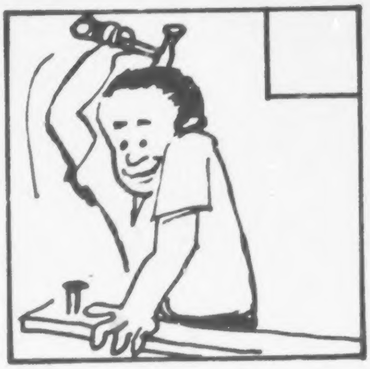
Decide which sentence describes the action in the picture and underline it.

28



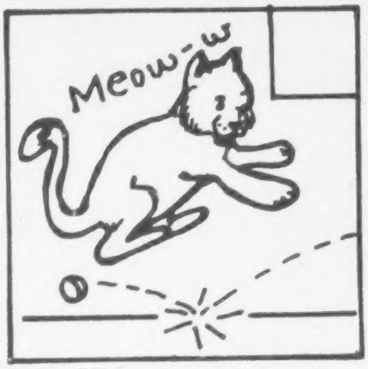
1. THE MAN WALKS
2. THE MAN SITS
3. THE MAN SLEEPS

29



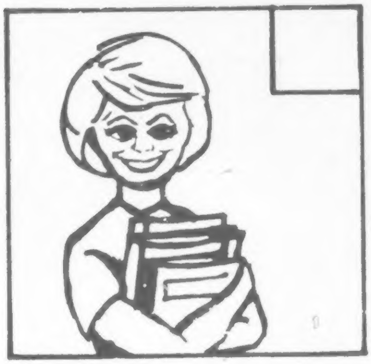
1. JOHN SLEEPS
2. JOHN WORKS
3. JOHN RESTS

30.



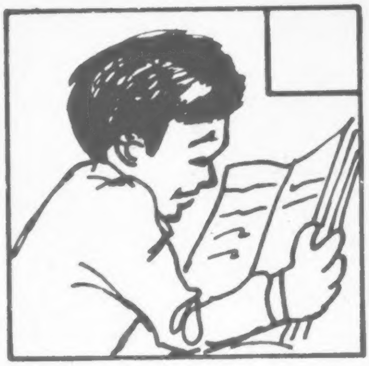
1. THE CAT JUMPED
2. THE CAT FIGHTS
3. THE CAT LOOKS

31.



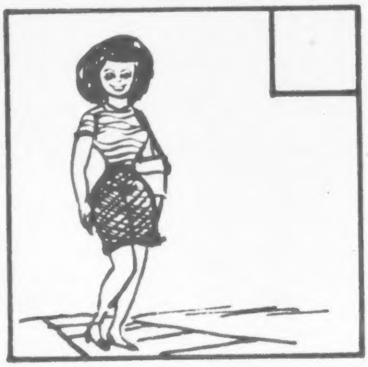
1. THE GIRL IS A STUDENT
2. THE GIRL IS A NURSE
3. THE GIRL IS A SECRETARY

32.



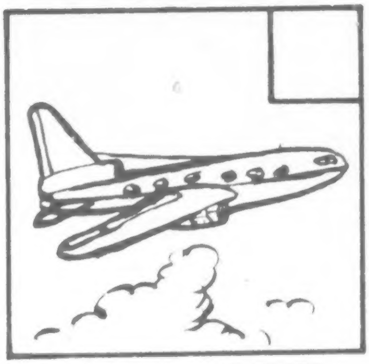
1. JUAN READS
2. JUAN SLEEPS
3. JUAN EATS

33.



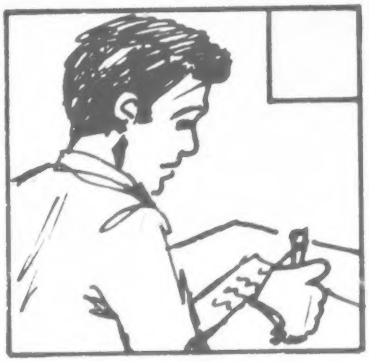
1. MARIA RUNS
2. MARIA READS
3. MARIA WALKS

34.



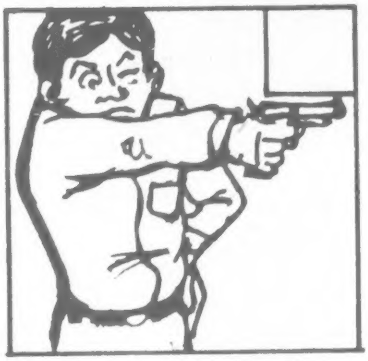
1. THE AIRPLANE FLIES
2. THE AIRPLANE LANDS
3. THE AIRPLANE STOPS

35.



1. JOSE WRITES
2. JOSE READS
3. JOSE TALKS

36.



1. THE MAN AIMS THE GUN.
2. THE MAN HOLDS A PENCIL
3. THE MAN HOLDS A SPOON

GROUP III

MANUEL'S DECISION

Life for Manuel was not easy in his hometown. His father was working very hard to support his family. They were not rich, but his family was a very happy one.

Manuel was in school. There were thirty-two students in his class, and the teacher did not give him individual attention. Manuel was getting tired of school. One day he finally quit. The next month was very hard for Manuel. He went from one place to another looking for a job. He had difficulty in finding a job because he did not have a trade or a High School Diploma.

One day he went to the Texas Employment Office. At that office he was told about the Job Corps. The man there told Manuel that in the Job Corps he could learn a trade. He could also improve his reading, writing, and English vocabulary. All these things would be taught in small classes where he would learn at his own speed. His job Corps teachers would give him individual attention.

Manuel came to the Job Corps. Here he learned a trade and earned the equivalent of a high school diploma. He also learned about other people's culture. He, in turn, told his Black and Anglo friends about his own rich culture. Finally, Manuel graduated from the Job Corps. After graduation he was able to get and hold a good paying job. Now he is glad he came to the Job Corps.

(To evaluate a C/M's pronunciation, the evaluator should ask the student to read the above story.)

QUESTIONS: PREGUNTAS

Pick Out and Circle the Correct Answers
Escoja y Ponga en un Circulo la letra que
represente la Respuesta Correcta:

1. Life for Manuel in his hometown was not very:

   A. good
   B. easy
   C. different

2. Manuel's family was

   D. poor
   E. rich
   F. happy

3. Manuel was getting   of school.

   G. bored
   H. discouraged
   I. tired

4. Manuel found out about the Job Corps in the:

   J. Texas Employment Office
   K. school
   L. streets

5. Was Manuel given individual attention by his teachers in the Job Corps?

   M. maybe
   N. no
   O. yes

6. In the Job Corps Manuel was able to learn a:

   P. song
   Q. trade
   R. dance

PART III

Write in your own words (English) why YOU came to classes.
Escriba en sus propias palabras (en Ingles) porque vino a las clases.

(C/M should be asked to read his own composition. This will let us know how good or bad his pronunciation and grammar are.)

IV. Circle the answer that fits the sentence best:

1. The crops were good because the land was ____________.

a. fertile   b. cultivate   c. irrigation

2. The ____________ is very mild in South Texas.

a. aluminum   b. climate   c. combine

3. The supply was ____________.

a. raise   b. accident   c. enormous

4. He is very ____________ to have won the prize.

a. excellently   b. fortunate   c. limited

5. That box ____________ many valuable objects.

a. contains   b. special   c. explode

6. The ____________ of his speech was tremendous.

a. society   b. effect   c. avoid

7. We have ____________ many new methods.

a. society   b. farming   c. developed

8. All people have ____________ to the government.

a. semester   b. ability   c. access

9. Much of the ____________ of the area was directed by

the church.

a. activity b. futile c. financial

10. He did not ____________ his reasons for quitting.

a. economic b. indicate c. dogma

V. Whole Numbers; Fractions; Decimals; Percentage; Algebra:

1. $\begin{array}{r} 9 \\ \underline{6} \end{array}$ 2. $\begin{array}{r} 8 \\ 6 \\ \underline{9} \end{array}$ 3. $\begin{array}{r} 89 \\ \underline{64} \end{array}$ 4. $\begin{array}{r} 56{,}834 \\ 4{,}762 \\ 342 \\ \underline{\phantom{00{,}0}28} \end{array}$ 5. $\begin{array}{r} 5/14 \\ \underline{3/14} \end{array}$

6. $\begin{array}{r} 3/8 \\ \underline{3/4} \end{array}$ 7. $\begin{array}{r} 1\ 6/5 \\ \underline{1\ 3/10} \end{array}$ 8. $\begin{array}{r} 3/2 \\ 7/6 \\ \underline{13/12} \end{array}$ 9. $\begin{array}{r} .34 \\ \underline{.61} \end{array}$ 10. $\begin{array}{r} \$3.24 \\ 6.38 \\ \underline{2.14} \end{array}$

Subtract:

11. $\begin{array}{r} 8 \\ \underline{3} \end{array}$ 12. $\begin{array}{r} 38 \\ \underline{22} \end{array}$ 13. $\begin{array}{r} 84 \\ \underline{79} \end{array}$ 14. $\begin{array}{r} 238 \\ \underline{169} \end{array}$ 15. $\begin{array}{r} 5/8 \\ \underline{2/8} \end{array}$ 16. $\begin{array}{r} 2/8 \\ \underline{6/32} \end{array}$

17. $\begin{array}{l} 5 \\ \underline{3\ 3/4} \end{array}$ 18. $\begin{array}{r} 2.43 \\ \underline{1.21} \end{array}$ 19. $\begin{array}{r} \$6.09 \\ \underline{3.04} \end{array}$

Multiply:

20. $\begin{array}{r} 204 \\ \underline{2} \end{array}$ 21. $\begin{array}{r} 567 \\ \underline{403} \end{array}$ 22. 4 x 3 1/2= 23. 1/6 x 4/8=

24. 6 1/2 x 4= 25. $\begin{array}{r} 8.05 \\ \underline{.64} \end{array}$ 26. $\begin{array}{r} \$3.84 \\ \underline{20} \end{array}$

Divide:

27. $6\overline{)36}$ 28. $4\overline{)27}$ 29. $22\overline{)484}$ 30. $19\overline{)2467}$

31. $8/10 \div 3/10=$ 32. $8 \div 3\ 3/4=$ 33. $3\overline{).64}$

34. $.87\overline{)348}$ 35. $1.2\overline{)6.28}$

Addition of Directed Numbers:

36. $\begin{array}{r} +4 \\ \underline{+6} \end{array}$ 37. $\begin{array}{r} -9 \\ \underline{+3} \end{array}$ 38. $\begin{array}{r} -32 \\ \underline{-19} \end{array}$

Addition of Monomials:

39. $\begin{array}{r} 3x \\ \underline{+6x} \end{array}$ 40. $\begin{array}{r} 44s \\ \underline{+22s} \end{array}$ 41. $\begin{array}{r} 38d \\ \underline{+11d} \end{array}$

Subtraction of Monomials:

42. $\begin{array}{r} 6x \\ \underline{-3x} \end{array}$ 43. $\begin{array}{r} 16x \\ \underline{-10x} \end{array}$ 44. $\begin{array}{r} 24t \\ \underline{-13t} \end{array}$

Solve the Following Equations:

45. $3x=12$ 46. $2x + 6=18$ 47. $4x - 1=25$

Solve the Following:

48. Mr. Franks bought a suit at this 25% off sale. The suit was originally priced at $65.00. How much did he save?

49. An oil company reports that gasoline in storage tanks evaporates at a rate of 1/2 of 1% in a week. If a tank holds 600 gallons when full, how many gallons will evaporate in a week's time?

50. $10\ 1/3 \div 6\ 3/4=$

V. During the early days of our nation, most of the people lived in rural areas. In fact, the primary attraction to the New World was that anyone could own land. At the time of the American Revolutionary War, the economy of the new nation was still agrarian.

In the 19th Century, our nation went through the Industrial Revolution. During this time, man invented or perfected such machines and products as the cotton gin, the electric light, and the repeating rifle. More people came to the city to live, because that was where they could find a job.

The 20th Century saw even further urbanization. Techniques such as the assembly line and interchangeable parts made mass production possible. This created more jobs which in turn gave more people more money to spend. This new affluence and spending stimulated even more production.

Today, as a result of this cycle, we are an urban nation. The transition from a rural to an urban society has not been easy. More of the problems facing us today are a result of improper planning by the cities. Since there does not seem to be any reversal in the urban trend, we can only hope that better solutions to the problems of the city are found in the future.

Based on the story that you have just read, pick the word or phrase which best completes the sentences below.

1. During the early years of our nation, most of the people lived in:
    A. rural areas
    B. urban areas
    C. Alaska
    D. the Old

2. An attraction to the New World was:
    A. the climate
    B. land ownership
    C. the Indians
    D. the adventure

3. The Industrial Revolution brought about many:
    A. bloody wars
    B. inventions
    C. religions
    D. houses

4. More people moved to the city because of:
    A. smog
    B. their relatives
    C. the taverns
    D. jobs

5. The assembly line and interchangeable parts brought about:

    A. wars
    B. famine
    C. mass production
    D. loose moral character

6. The transition from a rural to an urban society was:

    A. easy
    B. never done
    C. not easy
    D. done over a period of one year

7. Many of the problems of the cities today were caused by:

    A. improper planning
    B. the seven-year locust
    C. corrupt businessmen
    D. antidisestablishmentarianalism

Write a short essay on the problems a person could encounter if he moved from the country to the city.

VI. Circle the lettered word which most nearly defines the numbered word:

1. circumstances a. evidence b. censors c. conditions
2. preceding a. earlier b. precise c. excessive

3. expectation a. what you look forward to b. the act of enlarging

c. the act of developing

4. experience a. the events one lives through b. to make plain

c. to relieve of responsibility

5. duration a. a degree of hardness b. the time something lasts

c. imprisonment

6. cope a. to say b. to overcome problems

c. sleeve outer garment

7. adaptation a. adjustment to conditions b. habitual use of a drug

c. something added; supplement

8. flexible a. can change b. weak c. can be eaten

9. calculate a. to figure out b. to harden

c. to execute

10. prosperous a. doing well successful financially b. relating to the ruture

c. appears that it will turn out well

VII. Circle the word that fits the sentece best:

1. He has a great ____________ for work.

a. protagonist b. capacity c. cope

2. We cannot ____________ under those conditions.

a. function b. adaptation c. prosperous

3. ____________ in class helps one learn.

a. Financially b. Participation c. Imprisonment

4. Those jobs do not ____________ college.

a. attend b. exceed c. require

5. Your first ____________ is often correct.

a. impression b. enthusiastic c. flexible

6. He used many ____________ while doing the work.

a. habitual b. capacity c. precautions

7. They did the work ____________ well.

a. function b. extremely c. daring

8. She speaks very ____________, don't you think?

a. confidently b. enormous c. pretty

9. Is the solution to the problem ____________?

a. experience b. subsequent c. accurate

10. Rose is one of the most ____________ people I know.

a. enthusiastic b. impression c. syllogistic

VIII. Circle the answer that fits the sentence best:

1. ____________ I often have difficulties.

a. Speaking rapidly, b. Even though I study alot,

c. Yesterday,

2. The boys and I ____________ to the beach.

a. walked b. walks c. used to sing

3. We went to the ____________ to look for a job.

a. Linda and Rose b. Texas Employment Commission

c. texas employment commission

4. Neither of the ____________ cried much.

a. babys b. babies c. baby

11. The books are ____________ the table.

a. in b. on c. at

12. He went ____________ the staris.

a. through b. on c. down

13. He is going ____________ from here.

a. away b. near c. behind

14. Take it ____________ of there, please.

a. between b. up c. out

15. John and Mary live ____________ the lake.

a. under b. out c. by

The Instruments:

Inferred Self-Concept Scale

Inferred Self-Concept Scale

Subject's Name______________________Sex________________Center_______

Level________________________________Date______________ Rater________

We are concerned here with your judgement of the Subject's "view of himself" ("self-concept") as it is generated by and in this setting. You are asked to describe your perception of a Subject's self-concept in terms of the following items. Please indicate your rating on each item, using the scale below.

1. Never
2. Seldom
3. Sometimes
4. Usually
5. Always

Circle one					
1	2	3	4	5	1. Enjoys working with others
1	2	3	4	5	2. Exhibits self-confidence
1	2	3	4	5	3. Socializes with less competent peers
1	2	3	4	5	4. Evidences strong pleasure in good work
1	2	3	4	5	5. Is antagonistic to authority
1	2	3	4	5	6. Has unrealistic expectations for himself
1	2	3	4	5	7. Is easily discouraged
1	2	3	4	5	8. Appears unsociable
1	2	3	4	5	9. Is unfriendly to peers
1	2	3	4	5	10. Tries to dominate or bully
1	2	3	4	5	11. Fights
1	2	3	4	5	12. Talks compulsively
1	2	3	4	5	13. Seems afraid of authority
1	2	3	4	5	14. Feels he is "picked on" by peers
1	2	3	4	5	15. Gives up easily

1 2 3 4 5 16. Is defiant

1 2 3 4 5 17. Is quarrelsome or argumentative

1 2 3 4 5 18. Is over-sensitive

1 2 3 4 5 19. Provokes hostility from peers

The Instruments:

Language Rating Scale

Level

ENGLISH LANGUAGE PROFICIENCY
(Check the appropriate box under each column)

Student's Name: ____________________
Center: ____________________

C Comprehension Level)	S (Speaking Level)	R (Reading Level)	W (Writing Level)
C-0 No practical proficiency.	S-0 No practical proficiency.	R-0 No practical proficiency	W-0 No practical proficiency
C-1 Elementary proficiency: Understands most simple questions and statements on familiar topics when spoken to very slowly and distinctly. These often have to be restated in different terms before he understands. ☐	S-1 Elementary proficiency: Asks and answers questions on daily personal needs, within a limited vocabulary and with frequent errors in pronunciation and grammar. ☐	R-1 Elementary proficiency: Reads and understands elementary lesson material and common public signs. ☐	W-1 Elementary proficiency: Writes simple statements and questions using a very limited vocabulary with frequent errors in spelling and structure that frequently obscure meaning. ☐
C-2 Limited working proficiency: Understands most conversation when spoken distinctly and at a slower than normal rate. Points have to be restated occasionally. ☐	S-2 Limited working proficiency: Converses intelligibly but without thorough control of pronunciation and grammar within most social situations about current events, his work, family, autobiographical, information, and non-technical subjects. ☐	R-2 Limited working proficiency: Reads and understands intermediate lesson material or simple colloquial texts. ☐	W-2 Limited working proficiency: Writes sentences on familiar topics using non-technical vocabulary and basic structural patterns. Errors in spelling and structure occasionally obscure meaning. ☐
C-3 Minimum proficiency: Understands general conversation, lectures, and broadcasts when the rate of speech is near normal. ☐	S-3 Minimum proficiency: Participates effectively in all general conversation, discusses particular interests without making errors that obscure meaning. ☐	R-3 Minimum proficiency: Reads and understands material. Reads and understands at junior high school level. ☐	W-3 Minimum proficiency: Writes paragraphs on familiar topics using nontechnical vocabulary and basic structural patterns. Errors seldom obscure meaning. ☐
C-4 Good proficiency: Understands any conversation, plays, movies, etc. ☐	S-4 Good proficiency: Speaks language fluently and accurately on areas within his experience. ☐	R-4 Good proficiency: Reads high school level prose and material. ☐	W-4 Good proficiency: Writes prose with structural accuracy and varied vocabulary requirements. ☐
C-5 Native or bilingual proficiency: Comprehension proficiency equivalent to that of an educated native speaker. ☐	S-5 Native or bilingual proficiency: Speaks with a proficiency equivalent to that of an educated native speaker. ☐	R-5 Native or bilingual proficiency: Reads at a level of proficiency equivalent to that of an educated native. ☐	W-5 Native or bilingual proficiency: Writes with a proficiency equivalent to that of an educated native speaker. ☐

The Instruments

Social-Functioning Test

(English)

Social-Functioning Test

(English)

1. Where do you get information on the Driver's License Test?
2. What are 4 places you could find help if you needed a job?
3. Where do you get information on community service programs?
4. Where do you file a complaint about your employer?
5. Where do you go if you needed information on:
    a. the treatment of heart disease patients
    b. veneral diseases (V.D.)
    c. general health care
    d. cancer
    e. money management
    f. consumer problems
    g. Your personal rights
6. Where would you get information on:
    a. birth control
    b. abortion
    c. drugs
    d. alcoholism
    e. the draft
    f. a loan for college
7. What is the best source of reference for most subjects?
8. What book would you use if you wanted to find a magazine article on a particular subject?
    a. Reader's Guide to Periodical Literature
    b. "Magazines Unlimited"

c. Journal Index

d. Social Problems and Current Events Index

9. What source would you use if you wanted to find a book on a particular subject?

   a. Book Title Index

   b. What's What in U.S. Literature

   c. Card Catlogue

   d. Subject Guide to Periodicals

10. What part of the newspaper would you look at if you wanted to buy a used washing machine or other appliance?

11. What part of the newspaper gives you the official opinions of the newspaper?

12. Where do you find the table of contents or index of the newspaper?

13. What are three types of taxes that most people pay?

14. How and where can you get free help filling out your income tax.

15. Who should you see if you need help with a contract?

16. Where would you find information on a political canditate?

17. Name five special interest groups?

18. What is the difference between the white and yellow pages in the phone book?

19. Where are emergency numbers located in the phone book?

The Instruments
Social-Functioning
Test
(Spanish)

Social-Functioning Test
(Spanish)

1. ¿ Dónde se obtiene información tocante al examen para su licencia de manejar?
2. Nombre cuatro lugares que le pueden asistir en la búsqueda de empleo.
3. ¿ Dónde se obtiene información sobre los programas que sirven la comunidad?
4. ¿ Dónde se puede hacer una queja contra su patrón?
5. ¿ Dónde se obtiene información tocante:
    - a. al tramiento medico de pacientes cardiacos
    - b. las enformedes sociales
    - c. al cuidado general para la sulud
    - d. al cancer
    - e. los gastos diarios
    - f. a los problemas del comprador
    - g. a los derechos personales
6. ¿ Dónde se obtiene información tocante:
    - a. control de natilidad
    - b. al alcoholismo
    - c. a los narcoticos
    - d. los abortos
    - e. al conscripto
    - f. a prestamos para colegio
7. ¿ Cual es la mejor fuente de información sobre todos asuntos?

8. ¿En la biblioteca, que libro se usa para encontrar materia sobre un tema particular en una revista?

   a) Reader's Guide to Periodical Literature
   b) "Magazines-Unlimited"
   c) Journal Index
   d) Social Problems and Current Events Index

9. ¿Dónde se encuentra información sobre el tema de un libro?

   a) Book Title Index
   b) What's What in U.S. Literature
   c) Card catalogue
   d) Subject Guide to Periodicals.

10. ¿En que parte del periodico se buscan las ventas de máquinas de lavar y utensilios?

11. ¿En que parte del periódico se encuentran las opinones de la prensa?

12. ¿Dónde se encuentra el índice del periodico?

13. ¿Cuales son tres impuestos que todo mundo paga?

14. ¿Cómo y dónde se puede obtener ayuda gratuita sobre los formas de los impuestos al salario (Income Tax)?

15. Aquién se puede acudir para ayuda sobre un contrato?

16. ¿Dónde se encuentra información sobre un candidato político?

17. Nombre cinco organizaciones de intereses particulares en la politica

18. ¿Cual es la diferencia sobre las páginas blancas y las páginas amarillas en el libro de telefonos?

19. ¿Dónde se encuentran los números de emergencia en el libro de telefonos?

The Instruments:

Teacher's Daily

Evaluation of Materials

Teacher Evaluation of Materials

1. What type of approach are you using in teaching your students?

2. What material did you cover in this lesson?

3. How did you supplement the lesson?

4. What type of feedback did you receive? What observations have you made from the material and your students?

The Instruments:
One of the forms
for Teacher Evaluation of Students

Student________________________ Address________________________

Teacher________________________ POR FIN PROJECT

LEVEL II B
STUDENT EVALUATION BY PERFORMANCE CRITERIA

EVALUATION DATE

MODULE B7

Student uses the different kinds pronouns in sentences with 80% accuracy. ____________

Student uses the regular verbs in the 3 simple tenses in sentence with 70% accuracy. ____________

Student uses the being verbs in the 3 simple tenses in sentence with 70% accuracy.

Student uses 50% of the science-oriented vocabulary accurately in sentences.

MODULE B8

The student capitalizes all proper nouns with 80% accuracy. ____________

Student also capitalizes the first word in a sentence, the first word in every line of poetry, etc., as specified, 80% accuracy.

MODULE B9

The student will list the different points considered in the preparation of a good resume or application with 70% accuracy. ____________

At the end of this lesson the student will write a resume for himself with 70% success.

MODULE B10

The student will be able to list the different points to observe before reporting for the interview with 80% accuracy. ____________

They should also list the different things they have to carry on hand for the interview.

Student ______________________________Address______________

Teacher ______________________________POR FIN PROJECT

LEVEL IIB
STUDENT EVALUATION BY PERFORMANCE CRITERIA
(Cont.)

EVALUATION DATE

MODULE B11

Student will list the different kinds of drugs abused today by both young and old and the dangers associated with them with 80% accuracy. ________

Student will list the distinction made between the various types of users such as the merely curious, those subject to peer-groups pressure, the chonic user with 80% accuracy.

MODULE B12

The student recognizes, pronounces, spells, defines, and uses 80% of the provided vocabulary. ________

The student demonstrates his comprehension of magnetism-related words by correctly matching them to the provided definition in 7 of 10 instances.

In the thought-completion exercise, the student writes in the correct word or phrase in 6 of 10 spaces.

The Instruments:

Student Evaluation of Class

(English)

Student Evaluation of Class
(English)

Student: ______________________________ Date: ________________

Lesson No. ____________________________ Teacher: ______________

I. The material we studied today was:

A. Boring Interesting Very Interesting

B. Hard Easy Too Easy

C. Presented: Fast Just Right Slowly

D. Not Useful Useful Very Useful

E. I would like: ____

____

____

____

____

II. I feel that today I:

A. Didn't Learn Learned a Little Learned a Lot

B. Understood: A Little Well Most Everything

C. Learned Enough Did not Learn Enough

D. I feel that: ____

____

____

____

____

____

____

The Instruments:
Student Evaluation of Class
(Spanish)

Student Evaluation of Class

(Spanish)

Estudiante: ____________________ Fecha ____________

Leccion Número ____________________ Maestro ____________

I. La lección de hoy estuvo:

A. Aburrida	Interesante	Muy Interesante
B. Difícil	Fácil	Mucho Muy Fácil
C. Presentada: Muy Rapida	Así, Así	Muy Despacio
D. No Es Útil	Útil	Muy Útil

E. Me gustaría aprender ____________________

____

____

____

____

II. Siento que hoy:

A. No Arendí	Aprendí Un Poco	Aprendí Bastante
B. Comprendí:	Bastante Bien	Casi Todo
C. Aprendí Bastante	No Aprendi Casi Nada	

D. Siento que se necesita: ____________________

____

____

____

____

____

The Instruments:
Student Questionnaire

1/16/73

Page 1 of 2

POR FIN III
STUDENT QUESTIONNAIRE

Location:__________________________ Level:___________ Date:________________

Age:_____________ Sex:_____________ Ethnic Origin:________________________

Check the answer(s) that apply to you:

1. Why did you come to class?

A. To learn English
B. To get more education
C. To improve myself
D. To learn to read and write
E. To get a GED
F. To get a better job
G. To meet other people
H. ______________________________

2. Is the class helping you reach your goal?

A. Yes
B. No
C. Partially
D. ______________________________

3. Has your goal changed since you started class?

A. Yes
B. No
C. Partially
D. ______________________________

If you answered (a) or (c) to Number 3, what is your goal now?

A. To learn English
B. To get more education
C. To improve myself
D. To learn to read and write
E. To get a GED
F. To get a better job
G. To meet other people
H. ______________________________

4. How would you change the class?

A. New teacher
B. New materials (books)
C. New teaching methods
D. Different way of grouping students
E. Different place
F. Different time
G. Different subjects
H. More classtime
I. ______________________________

5. What do you want to study?
(Put a (1) by what you want most, a (2) by the subject you like second best, etc.)

_____Spoken English
_____Written English
_____Job topics
_____GED topics
_____Reading
_____Health
_____Music
_____Family life
_____Science
_____Spanish
_____History
_____Consumer topics
_____Art
_____Crafts
_____ __________________
_____ __________________

6. Have you ever asked your teacher for any help?

A. Yes, about classwork
B. Yes, about jobs
C. Yes, about family problems
D. Yes, about my plans for myself
E. No, I have no problems
F. No, I didn't feel I could
G. No, I didn't want to
H. ______________________________

7. Was the teacher able to help you?

A. Yes
B. A little
C. Yes, but I was uncomfortable
D. No, it wasn't possible
E. No, he didn't want to
F. ______________________________

8. How do you like the subjects you are studying?

Subject	Very Good	Good	Fair	Bad	Very Bad	Why?
English						
Math						
Science						
History						
Reading						
(Other)						

9. How long have you been attending adult classes in this center?

____

10. Have you attended adult classes in other centers?______________________

11. If so, for how long altogether?____________________

12. How much time outside class did you spend preparing for each class?

A. No time
B. Less than one hour
C. One to three hours
D. More than three hours
E. Other ______________

The Instruments:
Teacher Questionnaire

POR FIN III
TEACHER QUESTIONNAIRE

Page 1 of 4

1. Location of your class:_________
____

2. Sex: A. Male
Female

3. Ethnic Orgin:
   - A. Mexican-American
   - B. Anglo
   - C. Negro
   - D. Other _______________

4. Age:
   - A. Under 30
   - B. 31 - 40
   - C. 41 - 50
   - D. Over 50

5. Which level(s) do you teach?
   - A. GED
   - B. Level I
   - C. Level II
   - D. Level III
   - E. ESL
   - F. Multi-Level (includes_______________)
   - G. Other (specify)___________
   ____

6. Which subjects do you teach?
   - A. English Conversation
   - B. English Grammer
   - C. Reading
   - D. Math
   - E. History/Government
   - F. Science
   - G. Other (specify)______
   ____

7. Experience at teaching with ABE:
   - A. 0 - 6 Months
   - B. 7 mos. - 1 year
   - C. 13 mos. - 1½ years
   - D. 19 mos. - 2 years
   - E. 25 mos. & Over

8. Previous teaching experience:
   - A. No previous teaching experience
   - B. Taught in elementary school
   - C. Taught in high school
   - D. Other (specify)___________
   ____

9. Personal educational experience:
   - A. High School Diploma
   - B. 1 - 2 yrs. college experience
   - C. College Degree
   - D. Attended Workshops
   - E. Other (specify)___________
   ____

10. Resident of MNA:
    A. Yes B. No

11. Employment other than ABE class?
    A. Yes B. No

12. What type of teaching method(s) do you use for teaching:

(Check all that apply)	Level I	Level II	Level III	GED
A. Lecture				
B. Tutoring (individualized attention)				
C. Programmed Material				
D. Group Interaction				
E. Other (specify)				

13. Do students have the opportunity to practice spoken English?

A. Most of the time
B. Often
C. Sometimes
D. Seldom
E. Not at all

14. How much of the program goals or educational objectives should be formed by the student?

A. Each individual should have complete freedom in choice of subject matter.
B. Student should plan everything with teacher.
C. Should have say so in some areas.
D. Student should not be allowed to engage in any planning because of lack of know-how.

15. Do you set up objectives for the level you are teaching before you begin a class:

A. Yes B. No

If Yes, how do you determine your objectives?____________________

16. What are some of the objectives of your students?

A.
B.
C.
D.

17. Do you think the present curriculum is appropriate or inappropriate to the students' needs?

A. Yes B. No

In what way is it appropriate or inappropriate?____________________

18. Do you feel that the present system of placement is adequate or inadequate?

A. Yes B. No

Why?____________________

19. I have sufficient and varied material to use for the class.

A. Sufficient material
B. Not sufficient material
C. No material at all

20. I have sufficient and varied material to use as a supplement to the lessons given in class.

A. Sufficient material
B. Not sufficient material
C. No material at all

21. On what basis do you evaluate each student's progress?

A. Volume of information learned in a specified time (i.e. factual information, principles, rules, etc.)
B. Acquisition of some physical manipulative skill (i.e. knitting, mechanics, etc.)
C. Change of attitudes toward social or economic conditions
D. Others (specify)____________________

22. I have established a friendly relationship with________my students.

A. All C. Some
B. Most D. None

23. Informal conversation with my students is ____________________.

A. Always helpful
B. Sometimes helpful
C. Of little value

24. I feel that _______ can be done to motivate students.

- A. Much
- B. Little
- C. Nothing

25. In what ways do you feel a teacher's personality influences the achievement of a student?____

____

____

____

26. Do you visit your students at home?

- A. Frequently
- B. Occasionally
- C. Seldom
- D. Never

27. Do you call students who have been absent?

- A. Frequently
- B. Occasionally
- C. Seldom
- D. Never

28. Do you think the student notices the dedication of his teacher and proceeds to study and/or remains in class on the basis of his impressions.

A. Yes B. No

29. Do you feel that a teacher should create a competative class atmosphere?

A. Yes B. No

Why?____

____

____

____

30. What can the teacher do personally to bring about the success of individual students?____

____

____

____

The Instruments:

Administrator Questionnaire

1/19/73

POR FIN III ADMINISTRATOR QUESTIONNAIRE

Page 1 of 2

1. Sex:
   A. Male
   B. Female

2. Ethnic Orgin:
   A. Mexican-American
   B. Anglo
   C. Negro
   D. Other ____________

3. Age:
   A. Under 30
   B. 31-40
   C. 41-50
   D. Over 50

4. Experience at teaching with ABE:
   A. 0 - 6 Months
   B. 7 mos. - 1 year
   C. 13 mos. - 1½ years
   D. 19 mos. - 2 years
   E. 25 mos. - and Over

5. Previous teaching experience:
   A. No previous teaching experience
   B. Taught in elementary school
   D. Taught in high school
   E. Other (specify)__________
   ____

6. Personal educational experience:
   A. High School Diploma
   B. 1 - 2 yrs. college experience
   C. College Degree
   D. Attended Workshops
   E. Other (specify)____________
   ____

7. Resident of MNA:
   A. Yes
   B. No

8. Years as administrator with ABE:
   A. 0 - 6 Months
   B. 7 mos. - 1 year
   C. 13 mos. - 1½ years
   D. 19 mos. - 2 years
   E. 25 mos. - and Over

9. How much of the program goals or educational objectives should be formed by the student?
   A. Each individual should have complete freedom in choice of subject matter.
   B. Student should plan everything with teacher.
   C. Should have say so in some areas.
   D. Student should not be allowed to engage in any planning because of lack of know-how.

10. Do you think the students want additional subjects to study?
    A. Yes
    B. No

    Which subjects?____
    ____
    ____
    ____

11. On what basis do you think teachers should evaluate each student's progress?

A. Volume of information learned in a specified time. (i.e. factual information, principles, rules, etc.)
B. Acqusition of usuable skills
C. Change of attitudes toward social or economic conditions; greater ability to think independently.
D. Others (specify)____________________

12. In what ways do you feel a teacher's personality influences the achievement of a student?____________________

13. Do your teachers visit your students at home?

A. Frequently C. Seldom
B. Occasionally D. Never

14. Do your teachers call students who have been absent?

A. Frequently C. Seldom
B. Occasionally D. Never

15. What can the teacher do personally to bring about the success of individual students?____________________

16. Do you think ABE progress has been in keeping with the needs of those enrolled in ABE?

A. Yes B. No

Why?____________________

The Instruments:

Student Registration Form

DATE: ______________
PHONE: ______________

STUDENT REGISTRATION
POR FIN ADULT CLASSES

____
INSTRUCTOR

____
RECRUITER

LAST NAME FIRST MIDDLE ______________
ADDRESS ZIP ______________

BIRTH DATE ______________
BIRTH PLACE: CITY, STATE ______________
GRADE ______________
COUNTRY ______________

OCCUPATION ______________
MARITAL STATUS ______________
SEX ______________

FAMILY	SEX	BIRTH DATE	BIRTH PLACE	OCCUPATION OR SCHOOL	GRADE COMPLETED
SPOUSE:					
PARENTS:					
CHILDREN:					
1.					
2.					
3.					
4.					
5.					

DESIRED AREAS OF STUDY ______________
PREFERRED CLASS TIMES ______________

ASSIGNED LEVEL OF INSTRUCTION ______________
ASSIGNED CLASS TIMES ______________

STUDY PROGRESS (BOOKS COMPLETED, TESTS PASSED, TEACHER EVALUATION)
____
____